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Selim Raihan
Prabir De *Editors*

Trade and Regional Integration in South Asia

A Tribute to Saman Kelegama

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Preface

This book is a compilation of contributions from leading academics and international trade experts from South Asia and is dedicated to Late Dr. Saman Kelegma, whose untimely death in June 2017 left a huge void in the field of regional economic cooperation.

Saman Kelegama was the Executive Director of the Institute of Policy Studies of Sri Lanka (IPS) from 1995 until his sudden demise in 2017. He was a trade policy economist who also worked on industrial economics, public enterprise reform and macroeconomics. He obtained his D.Phil. (Econ.) from Oxford University, UK, in 1990, with an M.Sc. (Econ.) from Oxford University and an M.Sc. (Maths) first-class degree from the Indian Institute of Technology (IIT), Kanpur, India. He was a Fellow of the National Academy of Sciences of Sri Lanka and the Sri Lanka Economic Association. He was a Visiting Fellow at the Australia South Asia Research Centre, Australian National University, Canberra, Australia (1998); Salzburg Fellow (1997); USIS International Visitor (1993); and Visiting Fellow, Institute of Social Studies, The Hague, The Netherlands (1992/3). He was a Visiting Lecturer at the University of Colombo, Post-Graduate Institute of Management (PIM), Sri Lanka, Bandaranaike Diplomatic Training Institute (BDTI), Sri Lanka, and several other institutions. He served as a consultant to the World Bank, ADB, UNDP, UNIDO, ILO, UN-ESCAP, Commonwealth Secretariat, among other organizations. Dr. Kelegama also served in the Board of Directors of many governments, private sector and professional institutions, as well as in the governing boards of a number of regional and international institutions. He was the Chairman in many Sri Lankan and regional associations, and groupings and represented the Sri Lankan academia at a number of official delegations. He was also the Chairman of Singer (Sri Lanka) Plc. at the time of his death and served as a Board Member at Sampath Bank for 12 years. Dr. Kelegama served as the co-editor of the *South Asia Economic Journal* which is published by Sage International Publications and served in the Editorial Board of the PIM Journal—*Sri Lankan Journal of Management*. He published a number of books and over 100 articles in refereed journals. Most of his writings were on the Sri Lankan economy, regional integration and WTO issues.

Keeping in mind his enduring legacy regarding regional cooperation in South Asia, the chapters in this book cover issues related to the challenges of deeper regional integration in South Asia and propose strategies to address these challenges. Chapters of this book offer updated and rigorous academic and policy analysis of a variety of issues related to low intra-regional trade in South Asia, prevalence of tariff barriers, incidence of a variety of non-tariff measures, challenges of weak trade-related infrastructure and the need for trade facilitation, political economy of regional integration highlighting how bilateral political relations affect the integration process, low level of intra-regional investment, South Asia's pattern of integration with the global and regional value chains, pattern and dominance of informal trade, and some alternative regional integration initiatives in South Asia which include the bilateral, regional and sub-regional trade agreements within this region and with countries outside of this region. The primary audience for this book includes researchers and students of international trade and policymakers from South Asia and beyond. The richness of the academic content of the book will inspire researchers and students to use this book as supporting reference material in addition to the available textbooks on international trade. Furthermore, the pragmatic analysis of the policy options in different chapters will provide valuable guidance to the policymakers in South Asia to undertake effective policies and strategies for deeper regional integration.

Dhaka, Bangladesh — Dr. Selim Raihan
New Delhi, India — Dr. Prabir De

Contents

1 **Sustaining South Asia's Regional Integration Process** 1
Selim Raihan

2 **Bay of Bengal Integration: The New Agenda** 17
Prabir De

3 **Three Decades of SAARC and the Unfinished Agenda of Regional Integration** 33
Rajan Sudesh Ratna

4 **Harnessing the Potential of Regional Value Chains for Sustainable Development in Southern Asia: *Towards a South Asia Comprehensive Economic Partnership (SACEP)*** 45
Nagesh Kumar and Joseph George

5 **Political Economy of Policymaking: South Asia in Perspective** . . . 65
Dushni Weerakoon

6 **India in Global Production Network Trade: Patterns and Policy Implications** 75
Kunal Sen

7 **Beyond Commodities: India-Latin America Supply Chain Trade** 91
Ganeshan Wignaraja

8 **Benefits of Cooperating with Big Neighbors: The Case of Bangladesh and India** 109
Sanjay Kathuria and Nadeem Rizwan

9 **Making FTAs as an Effective Driver of Regional Integration: Sri Lankan Experience** 129
Ravi Ratnayake

10 Supporting Sri Lanka's Free Trade Agreements 147
Rashmi Banga

11 Facilitating Trade Between India and Sri Lanka 207
Suwendrani Jayaratne and Janaka Wijayasiri

12 Bilateral FTAs for Bangladesh: Identifying the 'Natural Partners' 227
Khondaker Golam Moazzem

13 Informality in Bangladesh's Agricultural Trade with SAARC: Addressing the Emerging Concerns 249
Mustafizur Rahman and Estiaque Bari

14 Informal Trade in the SAARC Region 267
Nisha Taneja and Samridhi Bimal

15 A Bay of Bengal Digital Ecosystem 279
Bipul Chatterjee

16 Harnessing the Potential of the Fourth Industrial Revolution in South Asia 295
Ratnakar Adhikari

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Selim Raihan is a Professor at the Department of Economics, University of Dhaka, Bangladesh, and the Executive Director of the South Asian Network on Economic Modeling (SANEM). Holding a Ph.D. from the University of Manchester, UK, Dr. Raihan has considerable expertise in empirical research on international trade, economic growth, poverty, labor markets, macroeconomic policies, political economies, and climate change issues. He has extensive teaching experience in international trade, economic modeling, quantitative economics, econometrics, development economics, and poverty dynamics. Moreover, he has 12 years of experience in conducting national and international training programs on economic modeling in various countries, including Bangladesh, India, Nepal, Mongolia, Senegal, Sri Lanka, and Thailand. Dr. Raihan has published a number of journal articles, books, book chapters, and working papers. He is the editor of "Thinking Aloud" – a monthly digest from SANEM, and regularly writes columns in leading English and Bengali dailies in Bangladesh. Dr. Raihan has worked for several national and international organizations including the Asian Development Bank, World Bank, UNDP, UNESCAP, UNCTAD, IFPRI, the Commonwealth Secretariat, FAO, European Commission, ILO, IDRC, DFID, etc. He has led and participated in a number of regional and international research projects on trade and regional integration issues.

Prabir De is a Professor at the Research and Information System for Developing Countries (RIS), New Delhi, India. He is also the Coordinator of ASEAN-India Centre (AIC) at the RIS. Prof. De works in the field of international economics, with research interests in international trade and development. He has been a Visiting Fellow to the Asian Development Bank Institute (ADBI), Tokyo; and a Visiting Senior Fellow to the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Bangkok. He has conducted policy research for the Government of India and several international organizations. Holding a Ph.D. in Economics from Jadavpur University, Calcutta, he has contributed several research papers to international journals and written books on trade and development. He is the Editor of South Asia Economic Journal.

Chapter 1
Sustaining South Asia's Regional Integration Process

Selim Raihan

1 Introduction

The concept of South Asia as a region is largely inherited from the British colonial legacy, with some exceptions. The year of 1947 and subsequently the year of 1971 saw the breaking down of the common integrated land mass of the Indian subcontinent into several pieces. The initiative for an integrated South Asia only started in the early 1980s with the formation of the South Asian Association for Regional Cooperation (SAARC) in 1985. Since then, there have been initiatives like SAARC Preferential Trading Arrangement (SAPTA) in 1993 and the agreement on South Asia Free Trade Area (SAFTA) in 2006 to boost the regional integration process in South Asia. Results of these initiatives, however, have remained largely unsatisfactory. Furthermore, with enhanced and persistent political conflicts between two major countries, i.e., India and Pakistan, there are now questions whether South Asia can sustain as an integrated region in the future.

2 Why Is Low Integration in South Asia?

The most cited, and of course very important, factors in the 'conventional' discourse are ineffective tariff liberalization due to the presence of long sensitive lists in the FTA, non-tariff barriers, lack of trade facilitation, and lack of political will. We explore three other factors which have not been discussed much in the regular discourse on regional integration process in South Asia. These are 'size-imbalance,' 'start-up stage,' and 'convergence of development process.' Here, we argue that while tariff and non-tariff barriers, lack of trade facilitation, and political will have

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their usual restraining effects, the aforementioned three other factors may qualify to be quite fundamental in understanding the unsatisfactory outcomes of the regional integration process in South Asia. For our analysis, we make comparisons among SAARC, Association of Southeast Asian Nations (ASEAN), North American Free Trade Agreement (NAFTA), European Union (EU), and some African regional trading blocs.

The 'size-imbalance' factor relates to the gigantic dominance of India in South Asia. The shares of India in the total land area, population, and real GDP of South Asia in 2016 are 62%, 75%, and 83%, respectively. The two other big countries in South Asia are Pakistan and Bangladesh with shares in regional GDP of only 7.6% and 5.6%, respectively. In contrast, among the ten ASEAN countries, Indonesia has the largest share of around 40% in all three cases (land, population, and GDP). However, with respect to the share in GDP, there are also five other major countries in ASEAN, such as Thailand (15.4%), Malaysia (13%), Singapore (11.1%), Philippines (10.7%), and Vietnam (6.2%). In NAFTA, among the three countries, the USA has the largest share in land (45.3%), population (66.4%), and GDP (84.7%). In the case of EU, in terms of the share in regional GDP, the leading countries are Germany (20.7%), France (15.4%), and the UK (15%). This implies that the size-imbalance factor is something unique in South Asia (though NAFTA can be a similar case), and it is a structural factor which is something given and very little can be done to counter it. However, this also highlights the fact that, in contrast to the leadership experience in any other comparable regional blocs (i.e., Indonesia in ASEAN and Germany in EU), there is a much more critical importance of India's leadership role in South Asia in taking the regional integration agenda forward.

The 'start-up stage' factor relates to the stage of the level of development of the region, in terms of the average per capita GDP of the region, when the process of integration gets started. Interestingly, the South Asian regional integration process started at a much lower level of per capita GDP. For comparison, we consider 1992/1993 as the base year when ASEAN FTA was signed and when SAPTA was signed too. In 1993, in ASEAN, intra-regional trade was 19%, which increased to 24% in 2016. In contrast, in SAARC, in 1993, intra-regional trade was only 3%, which increased to 5.5% in 2016. In 1993, SAARC had the average per capita GDP of US$ 869, in contrast to ASEAN's average per capita GDP of US$ 7645. If we exclude the outliers in both regions (Brunei and Singapore in ASEAN and Maldives in SAARC), then in 1993, those averages would be US$ 730 for SAARC and US$ 1700 for ASEAN. There is no denying that both NAFTA and EU started their regional integration process at much higher average levels of per capita GDPs than that of SAARC. Until recently, SAARC hosted five LDCs (now four as the Maldives graduated from the LDC status in 2011) out of eight members. Therefore, looking at the per capita GDP differentials, one may argue that the 'pull factor' for regional integration is rather weak in South Asia. Most of the African regional trading blocs also have a similar 'start-up stage' problem, and their regional integration processes also have been unsatisfactory as we observe in SAARC. All these issues indicate that there is a need for considerable 'unorthodox' efforts for energizing the regional

integration process in South Asia, which should involve a much greater emphasis on intra-regional services and investment integrations.

Finally, the 'convergence of development process' factor relates to the importance of the convergence of domestic development policies in the member countries for an effective regional integration process. In ASEAN, for decades, most of the member countries have been converging with respect to their domestic development policies related to trade openness, foreign investment, macroeconomic management, and social policies, which has led to the searching for a 'Southeast Asian development model' in the development economics discourse. In contrast, in South Asia, such convergence is very weak, and, therefore, there is no such 'South Asian development model.' This weak convergence of domestic development policies of the member countries in South Asia is a major restraining factor for deeper integration. Therefore, to energize and sustain South Asia's regional integration process, it is very important that the member countries get their domestic policies 'right.'

3 In Pursuit of a 'South Asian Development Model'

Remarkable growth experience and development of the East Asian countries (South Korea, Singapore, Taiwan, and Hong Kong) during the 1960s, 1970s, and 1980s led to the emergence of the discourse of 'East Asian Development Model.' A similar development model during the 1980s, 1990s, and 2000s among the Southeast Asian countries (Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, and Vietnam) is also observed. One important aspect of the East and Southeast Asian development models is that most of the countries in those regions witnessed a convergence of their economic and development policies, related to trade openness, foreign investment, macroeconomic management, and social policies, which led to the convergence of their development outcomes too. The East Asian as well as Southeast Asian experience illustrates economic development models with clear policy objectives and institutional arrangements at each stage. These 'development models' also suggest judicious balancing of the use of market mechanism and government interventions in the development process.

When we look at the South Asian experience of development, one obvious question comes to our mind—whether there is any 'South Asian development model'? To answer this question, at first, we have looked at the convergence of per capita gross domestic products (GDPs) of the South Asian countries and have also conducted a similar exercise for the Southeast Asian countries. Figure 1 shows the pattern of convergence of per capita GDPs in these two regions.

For the analysis on South Asia, we have dropped the Maldives as an outlier and have considered Sri Lanka as the benchmark. In 1980, Sri Lanka had a per capita GDP of US$ 909, which increased to US$ 3832 by 2016. For the Southeast Asian countries, we have dropped Singapore and Brunei as outliers and have considered Malaysia as the benchmark. In 1980, Malaysia had a per capita GDP of US$ 3317, which increased to US$ 11031 by 2016. It is clearly visible from the graph for Southeast

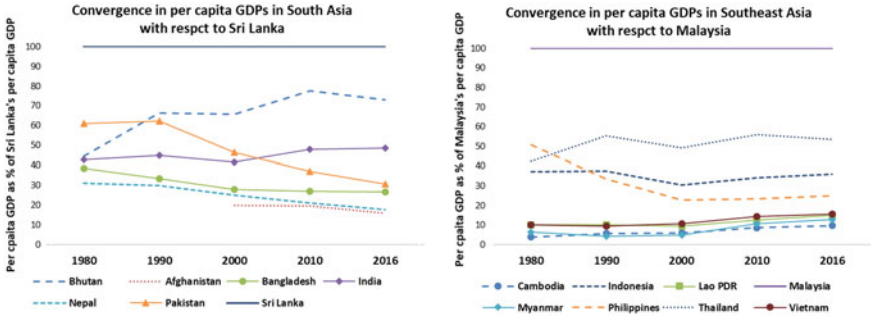

Fig. 1 Convergence in per capita GDPs in South Asia and in Southeast Asia. *Data Source* World Bank, WDI

Asian countries that all the other seven countries in that region demonstrated a gradual convergence toward the level of per capita GDP of Malaysia, and the convergence intensified since 2000. However, despite the rise in per capita GDPs in all South Asian countries since 1980, there seems to be a very weak convergence among these countries with respect to their per capita GDPs. As we make the comparison with respect to Sri Lanka's per capita GDP, only India and Bhutan since 1980 and Bangladesh since 2000 have been able to demonstrate some convergence, while Pakistan, Afghanistan, and Nepal have been sliding down continuously.

South Asian countries have a strong divergence in trade policy and trade outcomes too. In the case of trade orientation, between 1980 and 2016, while Bangladesh, India, and Nepal experienced considerable increase in the trade to GDP ratio (in 2016, the ratio was 38%, 40%, and 49% for Bangladesh, India, and Nepal, respectively), Sri Lanka experienced a downward trend but still maintained a ratio of over 50% in 2016, and Pakistan encountered a drastic fall in the ratio from around 37% in 1980 to 25% in 2016. Such diverse trade policies have led to diverse experience in export performance too. One indicator of the performance of the export sector is the ratio of exports to imports which suggests the extent by which the country's exports can finance imports. Only Bangladesh has been able to gradually and consistently increase this ratio from 27% in 1980 to 80% in 2016. While India maintained a rate of over 90% in 2016, Nepal had the least ratio of only 21% and both Pakistan and Sri Lanka had ratios of around 60% in that year. In contrast, all Southeast Asian countries, except the Philippines, demonstrated rapid convergences toward both high degrees of trade orientation and performance of their exports in financing imports.

South Asian countries have diverse experience in the structural transformation of their economies too. Except for Bangladesh and Sri Lanka, all other South Asian countries confronted declining trend in the share of manufacturing value added in GDP, which raises the concern of the phenomenon of 'premature deindustrialization.' Actually, such phenomenon is very prominent in both Pakistan and Nepal. Interestingly, such 'premature deindustrialization' is not observed in most of the Southeast Asian countries.

With respect to attracting Foreign Direct Investment (FDI), the experience in South Asia is quite diverse and poor. Except for India, FDI orientation (the ratio of FDI to GDP) is very low in South Asian countries. Especially, Bangladesh, Bhutan, and Nepal, the three least developed countries, have not been able to improve their FDI status significantly over the past couple of decades. In contrast, we can see a nice convergence in Southeast Asia in terms of a high degree of FDI orientation, and lagging countries, like Cambodia, Lao PDR, Myanmar, and Vietnam, are now taking the lead.

Finally, looking at the trend in human capital development, we see a weak convergence in South Asia. While all South Asian countries have been able to increase their average years of schooling between 1990 and 2015, the progress has been rather slow. One of the striking differences between the East and Southeast Asian development models and development experiences in South Asia is the much higher emphasis on human capital development in East and Southeast Asia. Many of the poorer outcomes in this respect in South Asia can be attributed to low public spending on health, education, and social protection in countries in this region.

Abovementioned analysis points to the absence of any 'South Asian development model' yet. The weak convergence of domestic development policies of the countries in South Asia is a major restraining factor for deeper integration in this region. The pursuit of a 'South Asian development model' will, therefore, require countries of this region to get their domestic policies 'right.'

4 Is Trade Policy in South Asia in the Right Direction?

Trade policies comprise the standards, goals, rules, and regulations which guide trade relations among countries. Trade policies involve taxes imposed on import and export, inspection regulations, and different non-tariff issues. Trade brings the efficiency of the global economy by ensuring different economies specialize in areas of their relative strengths, instead of producing all goods. Trade is also argued to be a means for ensuring sustainable and inclusive development. Trade liberalization, in general, is argued to have positive effects on economic growth. Trade liberalization may boost technical progress which, in turn, may enhance long-run growth prospects. Technical progress can be achieved through a rise in capital goods imports, improvements in the transfer of technology, and increased foreign direct investments. However, there are now strong arguments that trade liberalization is effective in boosting economic growth when it comes hand in hand with other complementary policies directed toward the financing of new investment and raising the quality of institutions.

Most of the South Asian countries followed inward-looking trade policies during the 1960s, 1970s, and 1980s. The inward-looking trade policies aimed at protecting domestic industries through import-substitution strategies with the hope of rapid industrialization, growth, and job creation. Export controls, tariffs, and quantitative restrictions (QRs) on imports, and overvalued exchange rates were put in place. Since the late 1980s, most of the countries in South Asia had embarked on employing

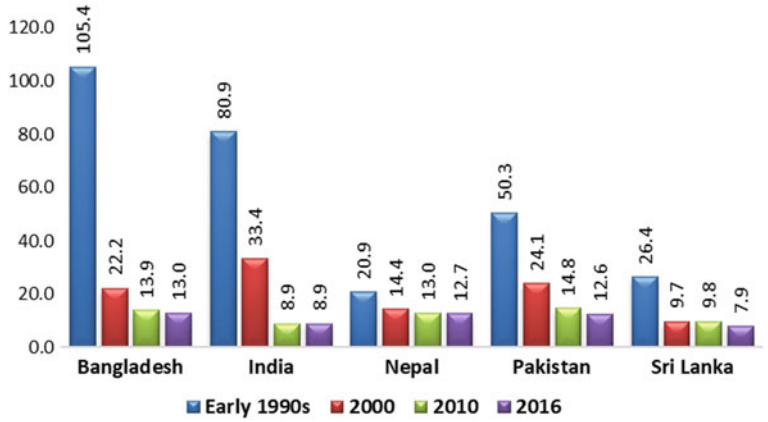

Fig. 2 Evolution of average applied tariff rate in South Asia (%). *Data Source* World Bank, WDI

different trade policy reforms, though Sri Lanka was the exception who set sail for it in the late 1970s. Figure 2 presents the evolution of the average tariff rate in South Asia since the early 1990s to 2016s. Among the South Asian countries, during the early 1990s, Bangladesh had the highest average tariff rate of more than 100%, followed by India's average tariff rate of over 80%. During that time, the lowest average tariff was of Nepal's (around 21%). Pakistan's and Sri Lanka's average tariff rates were 50% and 26.4%, respectively. In 2016, Sri Lanka had the lowest average tariff rate of 7.9% followed by India's 8.9%. The corresponding figures for Bangladesh, Nepal, and Pakistan in 2016 were 13%, 12.7%, and 12.6%. In general, it seems that despite a rapid reduction in tariff rates during the 1990s, the pace of tariff liberalization slowed down quite significantly in all these countries over the past one decade or so.

Figure 3 illustrates the evolution of trade orientation (trade–GDP ratio) of five South Asian countries over the period between 1990 and 2016. Both in 1990 and 2016, Sri Lanka had the highest trade–GDP ratio among the five countries. However, in general, Bangladesh is the only country in South Asia who has been able to consistently raise the trade–GDP ratio since 1990, whereas all other South Asian countries experienced significant fluctuations. In 2016, Sri Lanka had the highest trade–GDP ratio of 50% followed by Nepal's 48.9%. In contrast, Pakistan had the lowest trade–GDP ratio of 25.3%. India's and Bangladesh's trade–GDP ratios in 2016 were 40.3% and 38%, respectively.

However, one major concern is that, in recent years, most of the South Asian countries have been experiencing a falling trade–GDP ratio (Fig. 4). Especially, for Bangladesh and India, the fall in trade–GDP ratio has been much sharper than other countries. It is important to mention here that, given the on-going crisis in the global trade regime, associated with the escalated trade war between USA and China, the risk of a forthcoming depressed global trade regime is high, which can further affect South Asian countries trade orientation in the days to come.

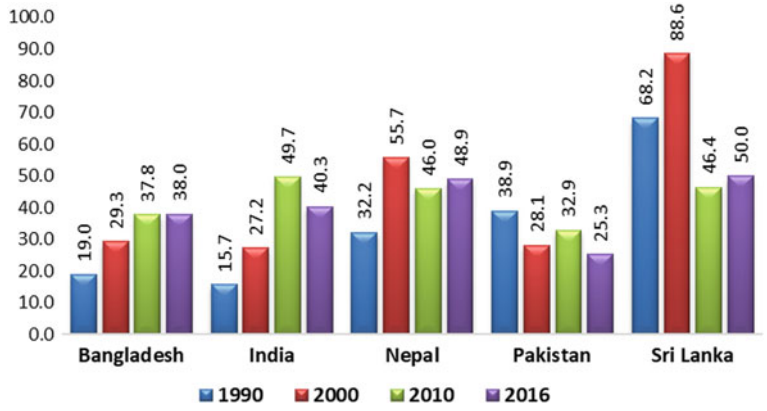

Fig. 3 Evolution of trade–GDP ratio in South Asia (%) Evolution of trade–GDP ratio in South Asia (%). *Data Source* World Bank, WDI

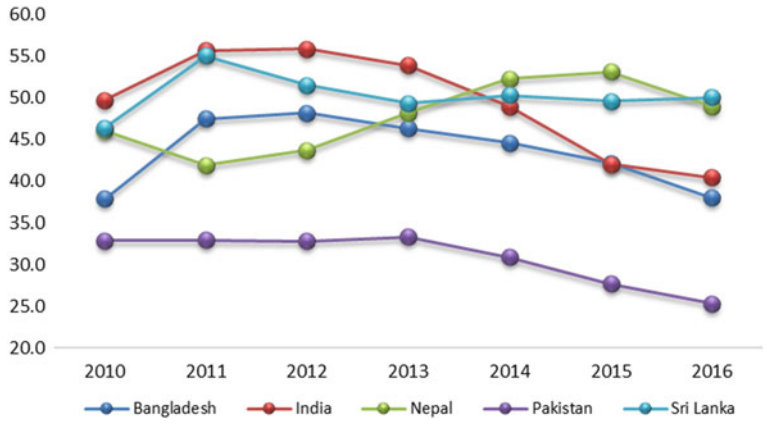

Fig. 4 Trade–GDP ratio (%) in South Asia since 2010. *Data Source* World Bank, WDI

We have explored the economy-wide effects of unilateral trade liberalization in five South Asian countries (Bangladesh, India, Nepal, Pakistan, and Sri Lanka) using Social Accounting Matrices (SAM) and the Computable General Equilibrium (CGE) models of these countries. The CGE framework captures the impact of unilateral trade liberalization on macroeconomy, trade, employment, and household welfare in the selected countries by tracing the price effects of exogenous shocks, where the variations in prices lead to the re-allocation of resources among competing activities, which may alter the factorial income and, hence, the distribution of household income. The macroeconomic effects of the tariff liberalization simulation for the five South Asian countries suggest (Table 1) that the price of imports in local currency falls by larger margins in Bangladesh and Nepal. Bangladesh experiences the largest rise in total demand for imports followed by India. Total domestic demand

Table 1 Macroeconomic effects of trade liberalization in South Asia (% change from base)

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Import price	−4.43	−0.09	−4.70	−3.27	−0.81
Exchange rate	8.51	8.29	4.21	3.51	1.94
Domestic production cost	0.58	0.54	0.24	0.10	0.24
Primary factor costs	1.80	1.64	1.65	0.91	0.70
Exports supply	13.07	8.38	5.46	3.58	1.65
Import demand	8.87	4.63	4.09	4.58	2.04
Real GDP	1.44	1.29	0.41	0.65	0.21
Domestic demand	2.43	1.53	1.59	0.62	0.36
Gross production	3.36	2.37	1.90	0.78	0.61
Aggregate employment	6.16	4.83	4.81	2.22	1.45

Source CGE simulations for Bangladesh, India, Nepal, Pakistan, and Sri Lanka

increases most in Bangladesh, followed by Pakistan. The average cost of domestic production increases in all countries due to the rise in primary factor costs. India has the highest rise in the nominal return to capital, followed by Bangladesh. The real exchange rate depreciates in all countries with the largest depreciation in Bangladesh. The real exchange rate depreciation makes exports more competitive in the world market. Hence, exports expand and the largest positive effect on exports is found in Bangladesh. Higher exports pull up economy-wide gross production for all five countries with the largest positive effect on Bangladesh. The largest positive effect on real GDP is seen for Bangladesh and the least for Sri Lanka. Also, the largest positive effect on employment is observed for Bangladesh.

It should, however, be mentioned that the aforementioned gains of trade liberalization, as reported by the CGE model simulations, can be substantially undermined by a number of supply-side and institutional constraints in the South Asian countries. These constraints are directly associated with the domestic production and investment environment and include weak physical infrastructure, access to finance, inefficient ports, high transport costs, shortage of skilled workers, technological bottlenecks, and high costs of doing business. Furthermore, the domestic capacities of the exporters in most of the South Asian countries need to be improved to meet different international standard requirements in the form of non-tariff measures. This is important to diversify exports and become competitive in the regional and international markets.

Despite a strong demand for deeper regional integration in South Asia, progress has been slow. The implementation of agreements often does not match the declared ambitions, and in this context, tariff and non-tariff barriers, lack of political will and leadership, institutional weaknesses and low capacity, and resource constraints have been argued to be the major impeding factors. Non-tariff barriers and associated procedural obstacles are exacerbated further by the lack of trade facilitation and cumbersome customs procedures at the land border ports. The largest export market in South Asia is the Indian market, followed by Pakistan, Bangladesh, and Sri Lanka.

However, while India has already provided almost full duty-free, quota-free market access to exports from South Asian Least Developed Countries (LDCs), Bangladesh, Nepal, and Bhutan are facing escalating challenges to secure and increase their exports to India. These challenges are related to their limited export capacities, lack of diversification of their export baskets, and various non-tariff barriers and procedural obstacles they face both at home and in the Indian market. To address these challenges related to tariff and non-tariff barriers and lack of trade facilitation in South Asia, there is a need to re-orient the trade policies of the South Asian countries. Deeper regional integration in South Asia also requires clear and visible leadership from the political elites in the region, especially from India, to move the regional integration agenda forward.

One important drawback of trade policies of most of the South Asian countries is the failure to promote trade and Foreign Direct Investment (FDI) nexus. Promotion of intra-regional investments and attracting extra-regional FDI in the goods and services sectors, in general, and energy and infrastructural sectors, in particular, should be closely linked to the trade policies. Failure to do so results in the weak integration of South Asian countries in the regional and global value chains.

In sum, given the emerging challenges and complexities in the global trading regime, there is a need for rethinking in the trade policies in the South Asian countries. Three major areas need to be focused on. First, the effort for further trade liberalization needs to be continued with the aim of effective integration with the regional and global value chains. Second, the trade policy needs to present an action plan to deal with the non-tariff barriers, trade facilitation, and supply-side issues both at home and in export destination countries. And, third, the trade policy needs to be proactive to effectively engage with multilateral, regional, and bilateral trading arrangements.

5 Political Economy of Regional Integration: Where Do We Stand in South Asia?

The aspiration for regional integration is high on the political agenda of most of the leaders in South Asia. Since the early 1980s, the South Asian Association for Regional Cooperation (SAARC) has been working as an economic and geopolitical organization for South Asian countries with the aim of deeper regional integration and cooperation in areas of economic, trade, and other common regional issues. Until now, there have been some achievements. Still, frustration prevails, as the actual implementation of agreements often does not match the declared ambitions. The resulting implementation gap is most commonly attributed to the lack of political will and leadership, institutional weaknesses, and capacity and resources constraints.

The dominant literature on regional integration has looked primary at the economic factors. However, to have a better and systematic assessment of the factors driving and constraining regional integration, it is important to explore the political

economy dimensions. While policymakers and stakeholders are often aware of such political economy dimensions, they are generally discussed only informally or in ad hoc manner. A systematic discussion of the political economy factors around the regional integration agenda can generate a broader awareness among stakeholders that may ultimately lead to more realistic and effective regional policy design and processes.

From a political economy perspective, there could be three interconnected drivers for deeper regional integration. These are economic drivers, political economy drivers, and extra-regional drivers (Fig. 5).

The economic drivers include four integration processes: market integration, investment integration, growth integration, and policy integration. 'Market integration' emphasizes integration in trade in goods and services through the removal of tariff and non-tariff restrictions. 'Growth integration' is the integration of economic growth processes of the respective countries so that growth in one country benefits growth processes in other neighboring countries. The 'investment integration' calls for the promotion of regional investment and trade nexus. 'Policy integration' is the

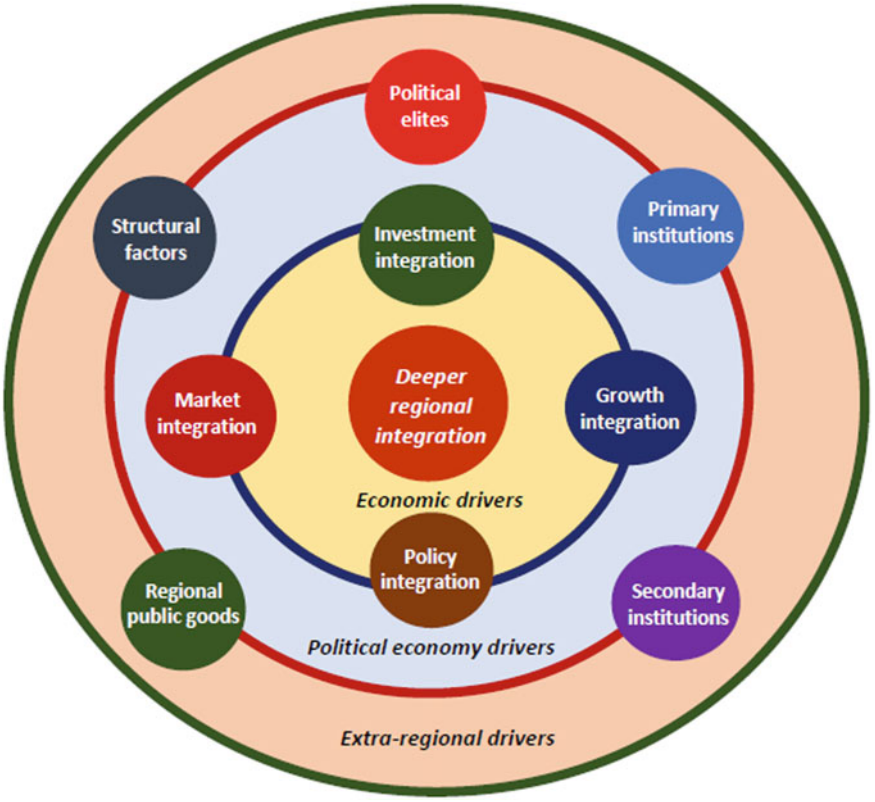

Fig. 5 Political economy framework of regional integration. *Source* Raihan (2016)

harmonization of the economic and trade policies of the countries for deeper regional integration.

However, the aforementioned four integration processes need favorable Political Economy (PE) drivers. The first PE driver is the 'primary institution' which is the official institutions at the regional level and in respective countries entrusted to carry out the agenda of regional integration. In South Asia, the SAARC Secretariat and relevant ministries in the member countries are such institutions. The second PE driver is the 'secondary institution' which are the private-sector associations, civil society organizations, and media. Primary and secondary institutions are a combination of market and non-market actors that govern economic and political environments in the region. The third PE driver is the 'regional public good' which includes regional infrastructure and status of regional trade facilitation. 'Structural factor' is the fourth PE driver which includes historical processes and geographic factors that shape the types of political, economic, and sociocultural institutions. The final PE driver is the role of the 'political elite' in the respective countries. The political elites have to be convinced for deeper regional integration.

Finally, extra-regional drivers include the global economic and political factors that can have influence over the region. The interaction between external factors and domestic and regional political economy.

There are now convincing evidence that deeper regional integration is needed for generating and sustaining economic growths in the South Asian countries, i.e., regional integration will be a critical factor in the future growth processes of these countries. This is required for larger employment creation and alleviation of poverty in a region which has the highest number and density of poor people. For the promotion of inclusive growth, regional integration will be an effective instrument. Ensuring food security is a challenging issue, and intra-regional trade in agricultural and food products will be immensely critical. Deeper regional integration through trade and transport facilitation will increase the competitiveness of these countries to better participate in global trade. Promotion of regional supply chain will be critical in developing dynamic comparative advantages of these countries. Finally, the peace dividends, through intra-country stable political relations, will be immensely high. There is a need for re-emphasizing the importance of concrete regional efforts in the diversification of the export structures of the smaller and weaker countries for them to effectively integrate with the regional economy.

Despite all shortcomings, SAFTA is a landmark achievement, and deeper integration has to take lessons from SAFTA. Intra-regional trade in South Asia has been low, but there are signs of huge potentials. There is a need to move beyond SAFTA. A comprehensive assessment is needed on the achievements of SAFTA so far. For deeper market integration in goods, full implementation of SAFTA is needed with an emphasis on further liberalization of intra-SAARC tariffs, reduction in the sensitive list, relaxing the rules of origin, and establishing effective mechanisms to deal with the NTMs/NTBs. There is a need to link intra-regional liberalization with enhanced intra-regional investment in different services sectors. Regional and subregional efforts have to be promoted for different trade and transport facilitation measures, for cooperation in energy generation and transmission, and for linking

energy cooperation and trade and transport facilitation with investment and growth processes of these countries. The focus should also be on the integration with the global and regional value chains. Promotion of intra-regional investments and attracting extra-regional FDIs in goods and services sectors, in general, and energy and infrastructural sectors, in particular, will be the key driver in the new decade. In the next decade, there will be a need for greater integration in trade, macro, financial, and industrial policies with the aim for removing different policy and structural barriers.

Remedies often focus on the strategy for and design of regional integration, its scope and speed, institutional development and technical constraints, as well as financing. However, insufficient attention is generally devoted to understanding the underlying dynamics of integration, at national and regional levels, and how these interact across and within countries. A more process-oriented approach, notably taking into account incentives, driving and blocking forces to the regional dynamics can help explain not only the perceived mismatches between regional integration expectations and implementation, but it can also help identify possible avenues toward more sustainable and effective regional integration and cooperation.

The role of the private sector, and various vested interests, is a case in point—while some private-sector actors can be against potentially increased imports, it is also important to identify potential beneficiaries, the role that the private sector can play in driving the regional process and hold governments to account, and of course the degree to which the benefits contribute to creating more and better jobs.

The general consensus among development and poverty alleviation thinkers is that a robust private sector is necessary for effective and continued growth in developing countries. Public actors can stimulate some private-sector growth, but for sustained growth, which delivers on more equal income distribution, the private sector needs to grow in strength and independence equal to the public sector.

Integrating infrastructure is a giant leap on the continuum toward deeper regional integration, allowing for better economies of scale and the development of cross-border public goods. Transport corridors (road and rail), airports, and seaports link countries physically, politically, and economically and also provide global market access. Transport infrastructure is often linked to other regional infrastructure projects in energy, communications, and water and sanitation. The political economy perspective considers how various players influence the national and regional decision-making context, and what impact their actions (or lack of action) have on the integration agenda. The infrastructure sector is certainly a catalyst for promoting long-term sustainable development of the region. The success of this relies on willing and competent institutions, political support at the highest level, a community of citizens who understand the rationale for integration, and the need for infrastructure investment and private-sector partners who come to the table with greater ambitions than simply the ‘large profit’ motive.

6 South Asia's Greater Integration in Asia

Regional integration and cooperation initiative in South Asia started with the formation of the South Asian Association for Regional Cooperation (SAARC) in 1985. SAARC includes Afghanistan, Bangladesh, Bhutan, India, Nepal, the Maldives, Pakistan, and Sri Lanka. SAARC countries signed the SAARC Preferential Trading Arrangement (SAPTA) in April 1993 which came into force in December 1995, with the aim of promoting intra-regional trade and economic cooperation within the SAARC region through the exchange of concessions. SAPTA was replaced by the South Asian Free Trade Area (SAFTA) in January 2006, designed to more proactively promote and facilitate intra-regional trade among the SAARC members. Besides SAFTA, there are three bilateral Free Trade Agreements (FTAs) in South Asia, which are India–Sri Lanka bilateral FTA, India–Bhutan bilateral FTA, and Pakistan–Sri Lanka bilateral FTA. Furthermore, the Bangladesh–Bhutan–India–Nepal (BBIN) is an initiative for subregional cooperation. Despite these, South Asia is one of the least integrated regions in the world. The proportion of within South Asia trade in the region's global trade hovers around 5% mark.

There are a number of challenges and tasks ahead for greater integration in South Asia. The presence of the long 'sensitive lists,' Non-Tariff Barriers (NTBs), lack of trade facilitation, and political relations between countries appears to be major barriers to intra-regional trade in South Asia. Furthermore, though liberalization of the services trade is a critical economic agenda, there has not been much progress on the South Asian Agreement on Trade in Services (SATIS) after it was signed in 2010. Also, South Asia remains one of the lowest recipients of Foreign Direct Investment (FDI) among the developing regions, with around 90% of the FDI inflow in South Asia is destined to India. Like trade, intra-regional FDI in South Asia comprises only less than 5% of the total FDI flow, and India is the dominant investor within the region. From a non-Indian and political economy perspective, there are concerns that a clear and visible leadership from India is yet to be seen to move the regional integration agenda forward in South Asia.

Despite the aforementioned 'pessimistic' scenarios, there are aspirations for greater regional integration in South Asia. Also, countries in South Asia aim for expanding integration with the rest of Asia, especially with the East and Southeast Asian countries. The initiative which created the opportunity for the majority of the South Asian countries (Bangladesh, Bhutan, India, Nepal, and Sri Lanka) to integrate with two Southeast Asian countries (Thailand and Myanmar) is the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) which was initiated in June 1997. However, even after 20 years of existence, the achievements under the BIMSTEC have been rather minimal.

India also has bilateral FTA with the ten member states of the Association of Southeast Asian Nations (ASEAN), which came into effect in January 2010. Furthermore, under China's Belt and Road Initiative (BRI), the Bangladesh–China–India–Myanmar Economic Corridor (BCIMEC) paves the opportunity for greater economic and

trade integration between two economic giants in Asia, namely China and India. BCIMEC also provides an opportunity for Bangladesh to exploit huge potential benefits from such economic and trade integration. However, BCIMEC has not yet been launched due to the political tension between India and China. The China–Pakistan Economic Corridor (CPEC) has however been at the most advanced stage among all the BRI initiates. Yet, being a bilateral economic corridor, CPEC has not been able to draw interest from other neighboring countries.

The most comprehensive regional integration initiative in Asia so far has been the Regional Comprehensive Economic Partnership (RCEP) which is a proposed FTA between the ten member states of the ASEAN and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, South Korea, and New Zealand). RCEP is one of the proposed mega trading blocs of recent times. RCEP negotiations were formally launched in November 2012, and until now, 18 rounds of negotiations have taken place. RCEP represents 45% of the world's population, accounts for about 40% of the world's GDP, and makes up around 30% of world trade. As the sole party from South Asia, RCEP has created significant opportunities for India to integrate with the advanced economies in Asia and the Pacific and to participate further with the global value chains. There are the views that RCEP can help reduce the overlaps among Asian FTAs, rationalize rules of origin, and promote FDI flows and technology transfers by multinational corporations. However, being the non-members, RCEP has led to some important implications for the other South Asian countries. There are concerns that the RCEP will lead to the escalation of bars in standards and trade governance which might work as significant non-tariff barriers for the South Asian countries, especially for the LDCs, while exporting to the RCEP countries. Therefore, there is a need for strong efforts to improve the quality of trade infrastructures, capacities, and institutions in these countries.

There are also risks of other South Asian countries with respect to the potential loss of market access from the erosion of trade preferences. Raihan (2019), using the global general equilibrium model (the GTAP model), suggests that the RCEP FTA would lead to gains, in terms of the rise in real GDP, for all RCEP member countries, and for India, it would be 0.73%. In contrast, all other South Asian countries would experience a fall in real GDP, and the major affected countries would be Nepal and Bangladesh as these two countries enjoy the largest trade preferences both in India and China. A hypothetical 'extended RCEP' scenario, where all other South Asian countries could join the RCEP FTA, would lead to gains for all South Asian countries, and India's gain would become larger than what would be observed under the RCEP. Therefore, other South Asian countries should negotiate for their participation in the RCEP. The 'extended RCEP' scenario would certainly lead to the meaningful integration of South Asia, East Asia, Southeast Asia, and the Pacific.

7 Conclusion

An integrated South Asia is important for many reasons. The region has a shared history, shared culture, and hundreds of years of common civilization which ran through different corners of this region. There is also convincing evidence that deeper regional integration is needed for generating and sustaining economic growth in South Asian countries in a region that is home to a significant share and the highest density of poor people in the world. Deeper regional integration through trade in goods and services and transport facilitation will improve the competitiveness of these countries to better participate in global trade. Promotion of regional supply chain will be crucial in developing dynamic comparative advantages of these countries. Finally, 'peace dividends,' through intra-country stable political relations, will be immensely high.

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Chapter 2
Bay of Bengal Integration: The New Agenda

Prabir De

1 Introduction

BIMSTEC is a unique regional cooperation initiative in terms of geographical contiguity and access to ocean. It not only has direct access to Bay of Bengal but also enjoys shared history and civilisational links. BIMSTEC's objective is to accelerate economic growth and social progress in the sub-region through joint endeavours; and to cooperate more effectively in joint efforts that are supportive of and complementary to national development plans of member states.[1] It is presently home to around 1.6 billion people, which constitute around 23% of the world's population. BIMSTEC brings together US$ 3 trillion economy, which accounts for 4% of global GDP and 3.7% of global trade.[2]

Although BIMSTEC made its humble beginning in the year 1997, till recently, it was a low-profile regional bloc and there are many reasons for this underachievement. Intra-regional trade has grown slightly to 5% in the last one decade and a half. Growth of intra-regional investment is negligible. The region is yet to witness any regional connectivity project on ground. Nevertheless, one can see a rejuvenated momentum to the BIMSTEC process at present due mainly to political directions as it has received at the BRICS-BIMSTEC Outreach Summit, held at Goa in 2016, and the fourth

[1] A series of research works went into building the foundation of BIMSTEC. Dr Saman Kelegama was one of the finest thinkers who provided much needed policy guidance. Refer, for example, Kelegama (2001).

[2] Refer to the year 2015 based on the World Development Indicators (WDI), the World Bank.

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BIMSTEC Summit, held at Kathmandu in 2018. A substantial progress has been made thereafter in terms of taking steps to energise the BIMSTEC integration.[3]

This chapter presents a set of policy measures in order to take forward the BIMSTEC integration process in the third decade of its establishment.[4]

2 Scope for New Cooperation

Among seven member countries, five members of BIMSTEC are also members of SAARC, two are part of ASEAN and six are part of SASEC. Therefore, BIMSTEC appears as a connector to multiple regional initiatives. Notwithstanding its cross-regional structure, BIMSTEC has high economic potential, given the region's economic dynamism, huge markets and rich natural resources.

BIMSTEC's members are at different levels of development with different income levels. It has three developing countries (India, Sri Lanka and Thailand) and four LDCs (Bangladesh, Bhutan, Nepal and Myanmar). Given such a structural variation, regional integration may generate high hope, particularly among LDCs and smaller economies. Therefore, scope for further cooperation is therefore very high.

Following three supporting developments in the last two decades add tremendous value to the integration process in BIMSTEC and provide further support to its integration process:

First, BIMSTEC now has a permanent secretariat at Dhaka with a Secretary General at its Head. A professional team is now running the office.

Second, with zero inter-state political or border dispute on continuous basis in BIMSTEC, member countries are motivated to speed up the integration process, both within and across the region.

Third, due to cross-regional FTAs between some of the member countries, BIMSTEC has become an effective alternative for Bay of Bengal countries to connect with the world.

In the Goa Retreat in October 2016, the leaders of BIMSTEC have given following directions on regional connectivity:

- to seek greater physical and economic connectivity between South and Southeast Asia;
- to advance multi-modal physical connectivity (air, rail, roads and waterways) in the BIMSTEC region;
- to prepare a Master Plan for BIMSTEC Connectivity;
- to conclude BIMSTEC Coastal Shipping Agreement; and

[3]Refer Kundu (2016) for a quick overview of BIMSTEC's performance. Also refer the summary of the conference organised by the Observer Research Foundation (ORF) on 6 December 2017 at New Delhi on BIMSTEC titled "BIMSTEC@20: The Way Forward", available at http://www.orfonline.org/research/bimstec-way-forward-december-2017/.

[4]This article is drawn upon author's paper "Strengthening BIMSTEC Integration: The New Agenda", published in De (2018).

- to explore the possibility of having a BIMSTEC Motor Vehicle Agreement.

The declaration of the 4th BIMSTEC Summit, held at Kathmandu in 2018, has following recommendations:

- Strengthening BIMSTEC Secretariat
- Activating the BIMSTEC institutions
- Setting up BIMSTEC Development Fund.

Recent years have shown increasing awareness of the opportunities offered through stronger regional cooperation in BIMSTEC. BIMSTEC has, however, made progress in several other areas such as physical and people-to-people connectivity or energy cooperation. At the same time, it has also witnessed many failures or slow progress.[5] It has been facing several challenges that cover a number of areas and which call for concerted efforts by the member countries.

We therefore recommend a set of policy measures, mostly economic in nature, in order to intensify the BIMSTEC integration process in an inclusive manner.

3 Proposals to Strengthen the BIMSTEC Integration

3.1 Trade and Investment

BIMSTEC has substantially high untapped trade potential,[6] a large part of which has been remained unrealised due to barriers to trade and structural differences of the economies, among which some are policy barriers such as tariff and non-tariff measures, exchange rate volatility, whereas some of the barriers are related to environment such as remoteness and low connectivity, inadequate banking and financial instruments, unfavourable business environment.[7] Therefore, such enormous untapped potential can be unlocked if member countries take effective measures to reduce the barriers to trade.

Although there has been some improvement, the cost and time to trade within BIMSTEC are still relatively high. Tariffs do not appear to be the major barrier to trade in BIMSTEC. It is the non-tariff issues, which are holding back the trade growth.

[5]Read Bhattacharjee (2018) for BIMSTEC's achievements vis-a-vis SAARC. Also refer Yhome (2017) and Rahman and Kim (2016). Also read, Xavier (2018).

[6]BIMSTEC has a trade potential of US$ 760 billion against the current intra-regional trade of US$ 40.5 billion. Trade volume refers the year 2016, sourced from DOTS, IMF, and the trade potential is sourced from ITC's Trade Map. Appendix 1 presents the country-wise potential trade for the year 2016.

[7]Refer De (2016).

The regional integration arrangements in BIMSTEC have done little to break barriers between the countries so far.[8] Breaking existing trade barriers, therefore, needs the countries to shoulder shared responsibilities.

Member countries are increasingly getting engaged in the region, either through trade or through investment.[9] Given the existing trade preferences among the BIMSTEC countries under SAFTA or ASEAN-India FTA or bilateral FTAs, implementation of BIMSTEC FTA may not necessarily increase the intra-BIMSTEC trade in the short run. But, it may certainly activate the production links between the countries, which would ultimately generate regional value chains, thereby more regional trade in circle.

Regional FTA coupled with trade facilitation would generate higher value addition to the economies at a time when all the BIMSTEC countries have ratified the WTO Trade Facilitation Agreement in 2017. Therefore, to unlock the untapped trade potential, member countries should look at the possibilities of finalising negotiations for a comprehensive FTA, introduce the state-of-the art trade facilitation measures, undertake measures to harmonise NTMs, set up region-wide physical and digital connectivity and strengthen energy linkages. These measures will help jump start economic integration in BIMSTEC.

Conclusion of BIMSTEC FTA

First and foremost would be to encourage trade in the region by signing BIMSTEC FTA. Free Trade Area Framework Agreement for BIMSTEC was signed in 2004. A Trade Negotiating Committee (TNC) was set up and had couple of rounds negotiations. The 21st meeting of TNC was held in 2018 in Dhaka. TNC's negotiation area covers trade in goods and services, investment, economic cooperation, as well as trade facilitations and also technical assistance for LDCs in BIMSTEC.

Another compelling reason for signing the BIMSTEC FTA would be to rationalise NTMs in the region. BIMSTEC region, alike other regions, suffers from various forms of NTMs. Rationalisation of NTMs would facilitate the regional trade, much faster than mere tariff cuts. India has rich experiences in product standard historically. Therefore, BIMSTEC member countries should conclude the trade negotiation and operationalise the FTA. BIMSTEC Secretariat may undertake a study to design an appropriate strategy for rationalisation of the NTMs of the BIMSTEC member countries.

Achieving Regulatory Harmonisation and BIMSTEC MRAs

The BIMSTEC countries should aim for regulatory harmonisation. It would ensure that goods may be exported without requiring additional certification, that customs procedures are harmonised and that many services can be traded without hindrance through deeper financial cooperation and mutual recognition of professional qualifications. Sectoral Mutual Recognition Agreements (MRAs) for standards and testing may facilitate intra-BIMSTEC trade. A regional body is needed to drive such programme in BIMSTEC.

[8] Refer FICCI (2018).

[9] Refer, for example, Chirathivat and Cheewatrakoolpong (2015).

Strengthening Regional Value Chains
BIMSTEC countries need to implement policies to link themselves to production networks in Southeast and East Asia and to develop regional and global value chains, in both goods and services. Regional value chains are building blocks to global value chains. The creation of RVCs in BIMSTEC will depend on a host of factors. One such factor lies in the ability of BIMSTEC firms to capitalise on existing resources and opportunities. For example, BIMSTEC countries having access to the Bay of Bengal are also home to several agricultural and horticultural resources. Developing more agricultural value chains across countries could be the key for unlocking this potential.

Facilitate Investment Cooperation
Investment cooperation should be accorded highest importance and priority to strengthen intra-regional investment in BIMSTEC. FDI inflow to BIMSTEC has crossed US$ 46 billion, which was mostly driven by India.[10] India's economic reforms, in the last three years, have resulted in higher FDI flows, which have created opportunities for other BIMSTEC neighbours. There is, however, a wide variation in the pace of investment reform(s) in the region. In order to achieve increased FDI, BIMSTEC countries should further reinforce their macro-economic environments towards liberalising and harmonising the investment regimes. Investment facilitation should be an upfront priority to build the needed infrastructure in BIMSTEC. Investment facilitation can be achieved either through the Agreements on Services and Investment or through a common regional investment measures. Besides, BIMSTEC countries should take initiatives to make the arbitration proceedings faster and should move towards convergence of Intellectual Property Rights (IPR) policy.

Integrate Capital Markets
Capital markets are vital for drawing private investment as well as for intra-regional investment. BIMSTEC countries should connect their capital markets. Regional network of BIMSTEC stock exchanges would facilitate regional investment and generate funding through stock exchanges.

Accreditation of Educational Qualifications
To promote services trade in the region, accreditation of educational qualifications is needed. Accreditation of select educational qualifications of participating countries will permit the students and skilled manpower to work within member countries in the sectors having skill deficit.

3.2 Regional Connectivity

There is increasing awareness that regional connectivity offers unique opportunities to address some of the key economic challenges. For example, all countries in the

[10]Based on UNCTAD Statistics.

region suffer from unstable and insufficient power supply. Hydropower potential of the mountainous Myanmar, Nepal and Bhutan, and India's north-eastern region offers opportunities to overcome these shortages in a sustainable manner if investments in hydropower can be realised and the necessary regional cooperation is in place.

Significant efforts are underway to address infrastructure or connectivity constraints in the region. The Asian Development Bank (ADB), the World Bank and other development organisations plan to support infrastructure financing in the region either through SASEC, BBIN, SAARC, GMS or ASEAN. In another example, the Indian government earmarks 10% of its annual budget for developing its north-eastern region, mostly through investments in infrastructure such as roads and railways.

Some of the BIMSTEC countries like India and Thailand have taken steps to build cross-border infrastructure in the region. Thailand has been helping Myanmar in completing construction of the Mekong-India Economic Corridor (MIEC), which is designed to connect Southeast Asia with South Asia on the eastern part of India in order to add greater momentum to the growing trade and investment linkages in BIMSTEC and also between ASEAN and India.

Completion of Trilateral Highway and BIMSTEC MVA

On the Trilateral Highway, the Tamu and Kalewa Friendship Road is being constructed with India's assistance. About 132 km have been completed and handed over to Myanmar. India has also undertaken the task of repairing/upgrading 69 bridges on the Tamu–Kalewa Friendship Road and upgrading the 122 km Kalewa–Yargyi road segment to highway standard. Myanmar has completed the upgrading of the Yargyi to Monywa stretch of the highway. This project will help in establishing trilateral connectivity from Moreh in India to Mae Sot in Thailand via Myanmar. In parallel, the Trilateral Motor Vehicle Agreement (MVA) is being negotiated. This Agreement will allow vehicles and passengers to move seamlessly for regional and international trade transportation purpose along the Trilateral Highway. The MVA shall provide a series of procedures that would facilitate movement of cargo and passengers along the corridors such as operating procedures (OP) for vehicles, customs procedures, and facilitation measures. The MVA will also provide the transit and transportation rights and obligations through Annexes and Protocols. This Agreement will have a critical role in realising seamless movement of passenger, personal and cargo vehicles along Trilateral Highway.

Completion of Kaladan Multi-modal Transit Transport Project

India is developing Kaladan multi-modal transit transport project (KMTTP) in Myanmar. This project envisages connectivity between Indian ports and the Sittwe port in Myanmar and road and inland waterway links from Sittwe to India's north-eastern region. The Kaladan project is aimed to provide an alternate route for transportation of goods to north-eastern India through Myanmar. KMTTP has two major components—(a) development of the port and IWT development between Sittwe and Kalewa in Myanmar along Kaladan River and (b) building a highway (129 km) from Kalewa to the India–Myanmar border in Mizoram. The components of this project

include (a) construction of an integrated port and Inland Water Transport (IWT) terminal at Sittwe including dredging; (b) development of navigational channel along river Kaladan from Sittwe to Paletwa (158 km); (c) construction of an IWT—Highway transhipment terminal at Paletwa; (d) construction of six IWT barges (each with a capacity of 300 tonnes) for transportation of cargo between Sittwe and Paletwa; and (e) building a highway (109 km) from Paletwa to the India–Myanmar border (Zorinpui) in Mizoram.

The Framework Agreement and two protocols (Protocol on Transit Transport and Protocol on Maintenance) were signed by India and Myanmar on 2 April 2008. Rehabilitation of the Construction of the integrated port-IWT Jetty at Sittwe is substantially complete. Construction work of the IWT terminal at Paletwa was started in April 2013 and was completed in 2018. The construction of the India–Mizoram border at Zorinpui to NH 54 (Lawngtlai) road on the Indian side in Mizoram is in progress under India's Ministry of Road Transport and Highways, which is also termed as National Highway 502A (NH 502A). About 66% of the new 99.83 km NH 502A, starting from NH 54 at Lawngtlai to Zorinpui in Mizoram, is done and will be completed soon.[11] However, the 109 km road from Zorinpui on the India–Myanmar border to Paletwa in Myanmar is yet to be completed. In 2015, the Government of India approved the revised cost estimate (about Rs. 29 billion) for construction of the KMTTP. Once completed, this corridor will provide a strategic link to the India's north-east.

Finalise and Implement the BIMSTEC Coastal Shipping Agreement (BCSA)

Inland Water Transport (IWT) is an area which holds high potential in cost-effective transportation of goods in the region. To start with, Ganga–Brahmaputra–Meghna–Irrawaddy river basin can be connected through cargo and passenger (e.g. cruise) transportation. Low-drafted cargo vessels can be operated in the designated IWT routes in BIMSTEC. We need to build coastal transportation along the BIMSTEC coast with the help of multi-modal transport operators. If promoted properly, it would be the most cost-effective corridor for trade and transportation in the region.

BIMSTEC Coastal Shipping Agreement (BCSA) is presently being negotiated by the member countries. The BCSA is proposed to deal with cargo ships and applicable up to 20 NM. First Working Group Meeting of the BCSA was held at New Delhi on 28–29 November 2017 at Delhi. Member countries have agreed to complete the negotiation of BCSA at the earliest.

Setting up BIMSTEC Economic Zone (BEZ)

Myanmar has been setting up quite a few port-based SEZs such as at Kyaukphyu, Thilawa and Dawei, which upon completion would not only strengthen BIMSTEC Connectivity but also generate employment and reduce poverty. To start with, we may consider setting up a BIMSTEC Economic Zone at Sittwe, Myanmar. This economic zone will promote trade and investment in the region. The investors of all BIMSTEC countries shall be allowed to invest in the BIMSTEC Economic Zone.

[11] Refer Indian Parliament question and reply by Gen. V K Singh, Minister of State (External Affairs) in April 2016.

Negotiate BIMSTEC Railway Agreement (BRA)
Once the Agartala to Akhaura railway link is completed, North-east India will be connected with Kolkata through Bangladesh with a reduction of distance from 1650 km to just 515 km. By 2020, railway line will reach Imphal, Manipur. What would be needed is to extend the railway line from Imphal to border town Moreh and then connect it with Myanmar railways and then to Thailand. Bangladesh–India–Myanmar–Thailand Railway is a feasible project, which should be promoted. BIMSTEC countries may consider opening a negotiation on BIMSTEC Railway Agreement.

Promote BIMSTEC Open Sky (BOS)
Improved air connectivity is a catalyst for promotion of tourism and services trade. BIMSTEC countries should facilitate air connectivity, particularly to link India's North-east with Bangladesh, Myanmar and Thailand. BIMSTEC countries may consider extending 5th Freedom Right to each others' airlines and promote an Open Sky in air cargo. To start with, the frequency of Air India flight between Kolkata and Yangon shall be extended to all the days in a week; link Imphal with Yangon via Mandalay; start a direct flight from Guwahati to Dhaka and Guwahati to Bangkok.

Strengthen BIMSTEC Digital Connectivity
BIMSTEC should give high priority to the digital connectivity in the region, particularly for bandwidth export and network sharing, etc., which would make ICT more accessible, affordable, inclusive, sustainable and useful to remote and rural communities, entrepreneurs, and research and training institutes in all BIMSTEC countries. Both Bangladesh and India are the landfall of several submarine cables. Optical fibre cables have to be linked up, particularly at the border, so that BIMSTEC countries benefit from the unused bandwidth in the region. Under this BIMSTEC Digital Connectivity Project, Myanmar would be motivated to undertake necessary construction for optical fibre networking. Besides, BIMSTEC countries may consider taking measures to reduce call rates by removing international roaming charges through the common operators (e.g. Airtel), which would drive Internet growth, improve productivity and facilitate business across the region.

Complete the BIMSTEC Connectivity Master Plan
Asian Development Bank (ADB) has completed the BTILS almost a decade back, and it has become outdated. Member countries have approached ADB to conduct the BIMSTEC Connectivity Master Plan. There is a growing consensus that BIMSTEC countries should build synergy with connectivity plans of ASEAN, SASEC and GMS. Japan's quality infrastructure initiative would be an important resource to achieve such objective. One of the recommendations of the BTILS was to create a single Working Group on transport and trade facilitation to be referred as BIMSTEC Transport Connectivity Working Group (BTCWG). The inception meeting of the BTCWG was held in Bangkok in August 2016. ADB has already completed the first draft of the BIMSTEC Master Plan of Connectivity. Member countries of BIMSTEC now have to take it forward by agreeing to implement the recommendations.

Signing the BIMSTEC Trade Facilitation Agreement
BIMSTEC countries have completed the negotiations for the Agreement on Mutual Assistance on Customs Matters. Since all the BIMSTEC countries have ratified the WTO TFA, a regional trade facilitation Agreement in BIMSTEC with greater commitments and possibly higher levels of obligation and wider coverage (WTO+) would pave the way to facilitate regional trade and value chains. Stronger cooperation between the Customs authorities of BIMSTEC countries is needed to not only facilitate trade but also link up each other's EDI systems, establishment of a 'single window', promote safe and secure trade, particularly at the border. A regional trade facilitation Agreement is also needed for cooperation in the matter of customs, training and capacity building, exchange of information, setting disputes, etc. BIMSTEC countries may consider signing the BIMSTEC Trade Facilitation Agreement (BTFA). To take these initiatives forward, BIMSTEC countries may set up a BIMSTEC Working Group on trade facilitation which will design the regional trade facilitation action plan and implementation strategy.

Sign TIR and UN Paperless Trade Agreement
Regulatory convergence, paperless trade and simplification of trade procedures are the three major challenges in BIMSTEC. Regulatory convergence is needed in transportation standards, customs and trade procedures. To achieve this objective, BIMSTEC countries may sign the UN Paperless Trade Agreement. Bangladesh has already signed it in 2017. At the same time, BIMSTEC countries may consider signing the international arrangements such as Transports Internationaux Routiers (TIR).[12] India, for example, has already signed and ratified the TIR.

3.3 Energy Cooperation

Energy security is critical for economic development. BIMSTEC is lagging behind other regions in sharing energy. All countries in the region suffer from unstable and insufficient power supply. Hydropower potential of the mountainous Myanmar, Nepal and Bhutan regions, and India's north-eastern region offers opportunities to overcome these shortages in a sustainable manner if investments in hydropower can be realised and the necessary regional cooperation is put in place.

Regional cooperation under the BIMSTEC framework would be helpful in sharing energy from the surplus areas to the deficit areas. BIMSTEC should pursue a stronger cooperation for sharing of energy in the region. At present, energy cooperation in BIMSTEC moves along three types of arrangements: first, sharing of energy such as India's export of electricity to Bangladesh; Bhutan's export of hydro power to India, etc. These are mostly bilateral initiatives; second, connection of electricity and

[12]The Convention on International Transport of Goods Under Cover of TIR Carnets (TIR Convention) is a multilateral treaty that was concluded at Geneva on 14 November 1975 to simplify and harmonise the administrative formalities of international road transport.

gas grids such as between India and Bangladesh; and third, trade in petroleum and energy products such as India's export of oil and oil products to Nepal, etc. Nevertheless, the supply–demand mismatch is very high in the region. Energy surplus and energy deficit countries, therefore, need to come together to develop a comprehensive Agreement for mutual benefit.

A regional grid would help smaller economies to benefit from their energy reserves. BIMSTEC countries have completed negotiations for the Memorandum of Understanding (MoU) on the Establishment of the BIMSTEC Grid Interconnection. This needs to be signed quickly so that its implementation begins soon.

Since most of the BIMSTEC member countries are members of International Solar Alliance (ISA), new projects such as BIMSTEC Gas Grid, BIMSTEC Renewable Energy Cooperation are not beyond our reach. BIMSTEC countries should consider forming the BIMSTEC Solar Grid Alliance since the region inherits benefits in terms of its geography. Wind power is another potential area for cooperation.

Myanmar–Bangladesh–India gas pipeline project should be revived since some of the offshore gas fields are owned by Indian companies like OVL. With the opening of construction of a BIMSTEC gas pipeline, the regional energy market is likely to improve. All these projects would ultimately lead to establish the BIMSTEC Gas Grid. Therefore, energy cooperation Master Plan for intra- and inter-regional energy grid links should be prepared.

3.4 People-to-People Connectivity

Visa facilitation in the form of a regional arrangement should be promoted. India's e-Visa project along with Thailand's visa on-arrival experiences may be shared with the region. BIMSTEC countries may consider Schengen-type visa for certain group of travellers, particularly tourists, business people and patients in the region. This is very much possible since most of the countries in BIMSTEC offer on-arrival visa. BIMSTEC Travellers Card (BTC) may also be introduced.

India may consider calling regular meetings with HOMs of BIMSTEC countries in Delhi. Setting up a BIMSTEC Centre or Bay of Bengal Centre will provide needed policy guidance to the BIMSTEC member countries.

Tourism is one of the main focus areas of the BIMSTEC and for India. Tourism is the powerful source of economic development and connects the people and culture within the BIMSTEC. Promoting Buddhist Circuit would bring travellers all around the world. BIMSTEC may consider organising BIMSTEC Tourism Fair, BIMSTEC Film Festival, BIMSTEC Food Festival, etc., every year across the region. At the same time, promoting health tourism is another aspect, which needs to be focused through Ayurveda, Yoga, Unani, etc. BIMSTEC can also formulate task force for traditional medicine.

BIMSTEC countries have rich and glorious history of cultural and civilisational links. The member countries may consider establishing the BIMSTEC Network of Museums and BIMSTEC Network of Monuments to preserve the value and explore the untapped potential by bringing out the civilisational links.

BIMSTEC countries have to strengthen regional cooperation in the field of higher education. Mutual cooperation among the universities in the BIMSTEC region would benefit the member countries. To start with, BIMSTEC member countries may consider setting up a network of universities such as BIMSTEC Network of Universities (BNU) as the way it has done for think tanks. BIMSTEC should also initiate the programme of teachers and students exchange among member countries that will strengthen people-to-people contacts. Thailand's Chulalong University may take the lead to set up the BNU. This network will work to facilitate exchange of students, encourage joint research, etc. between the member universities. We may also consider introducing BIMSTEC Fellowships to facilitate people-to-people connectivity. To start with, Nalanda University may be selected, which can host the BIMSTEC fellows interested pursuing cultural studies.

3.5 Dealing Non-traditional Security Threats

Security is indivisible, whether it is the security of sea lanes of communication in BIMSTEC region or the persisting challenges of terrorism and transnational crimes. BIMSTEC countries face severe security threats like smuggling, human trafficking, fake currency, drugs and piracy, etc. BIMSTEC countries need deeper regional cooperation in strengthening security in BIMSTEC region, particularly, to stop smuggling, human trafficking, fake currency and drugs. There are several agreements on non-traditional security areas signed in 2014, but they are yet to be fully operational.

BIMSTEC should also strengthen the maritime security through greater cooperation among coast guard and navies for constant vigilance, exchange of information, search and rescue, HADR, etc. India may consider hosting the first BIMSTEC conference on maritime security and cooperation.

3.6 Disaster Management and Emergency Response

Disaster risks and vulnerabilities have no national boundaries. Any major disaster like Tsunami can have a devastative effect beyond cross-borders. Most of the BIMSTEC countries have been experiencing weather and vulnerability to natural disasters. Several researches have also demonstrated that disasters particularly affect the poorest and most marginalised people, widening social inequalities and harming economic growth. Therefore, ignoring the disaster risk and allowing the risk to accumulate would have an undermining effect on its own future potential for social

and economic development. In this regard, several countries now have focused their priorities on disaster risk reduction to overcome the potential losses and preserve the critical resources for development. It is essential to underscore the importance of cooperation in the disaster management and emergency response. India has endorsed the Sendai Framework and developed National Disaster Management Plan (NDMP) 2016 in consistent with globally accepted best practices. India hosted the First Annual BIMSTEC Disaster Management Exercise on 10–13 October 2017 in New Delhi.

We need an early warning system for the BIMSTEC region as well as technical support to the disaster management force. To better prepare with disaster management, BIMSTEC member countries have decided to set up a BIMSTEC Disaster Management Centre in New Delhi to provide training, capacity building and share the country specific experience in building disaster resilience. India has established the Tsunami Early Warning System for the Indian Ocean Rim Countries. Its National Disaster Response Force has been deployed in other affected countries for response operations. Cooperation with IORA on disaster management will further strengthen the disaster management preparedness. Member countries may consider launching BIMSTEC Satellite to help the countries in disaster management.

3.7 Blue Economy Approach

BIMSTEC countries should adopt a Blue Economic Approach. Many of the BIMSTEC countries are members of IOR-ARC. The Blue Economy is envisaged as the integration of ocean economy development with the principles of social inclusion, environmental sustainability and innovative, dynamic business models. A strategic focus on the development of national ocean resources will be an important driver and enables of the ocean economy. In this regard, BIMSTEC countries may promote fisheries and marine resources and development of marine reserves. Adopting a Blue Economy Approach in Bay of Bengal would help facilitate deep sea mining in an effective and sustainable manner. BIMSTEC countries may consider signing MoU for promotion of fisheries, marine resources and development of marine reserves as well as deep sea mining.

4 Concluding Remarks

While efforts at the government levels, along with political will, have been playing a pivotal role in strengthening relations, enhanced connectivity in all dimensions is needed to contribute to the deeper integration, which would positively influence the future course of BIMSTEC. There is increasing awareness that regional economic integration offers unique opportunities to address some of the key economic challenges facing by BIMSTEC. Improving BIMSTEC integration, particularly in terms

of connectivity, commerce and culture, would pave the way in integrating South and Southeast Asia through BIMSTEC. A stronger BIMSTEC means a stronger Asia. Assistance of Japan as development partner will strengthen the BIMSTEC integration.

BIMSTEC is the only regional integration initiative that is yet to witness an FTA operating even after signing of the framework Agreement almost a decade back. BIMSTEC TNC has 21st round completed in 2018, but remained unsuccessful. There is huge expectation on India in building a stronger, inclusive and people-driven BIMSTEC. India's involvement in BIMSTEC, therefore, holds promise to foster the regional integration process. At the same time, BIMSTEC has unmet potentials in energy, fisheries, coastal shipping, air connectivity, tourism, education, health and culture. Integration in these areas has never been explored in BIMSTEC, and some of the initiatives hold high promise.

While efforts at the government levels, along with political will, have been playing a pivotal role in strengthening relations, enhanced connectivity, physical or otherwise, is needed to contribute to the deeper cooperation which would positively influence the future course of BIMSTEC. BIMSTEC is a natural choice for strengthening India's footprints in the neighbourhood under the Act East Policy (AEP).

Implementation matters mere signing of the FTA is not enough. In implementing FTAs, we need to keep in mind that regional integration can only be successful if it unleashes new competition that lowers prices, introduces new technology and gains productivity. At the same time, FTA may give rise to negative effects, including rise in poverty and inequality. These effects should be identified, and appropriate measures should be taken to address them. Coordinated efforts are necessary to realise sustainable growth and development in India and Southeast Asia. BIMSTEC can play an important role in the Indo-Pacific sphere of activities.

Twenty years after the establishment of the BIMSTEC, Bay of Bengal cooperation needs a new impulsion, or, more precisely, a real, substantive beginning to go beyond wishful thinking level. We have presented a series of measures to take the integration process to its next higher level.

The BIMSTEC integration has achieved much over the last 20 years. But its success has given rise to new challenges. It will continue to play a central role in promoting economic integration and inclusive development over the next 20 years in Bay of Bengal region.

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Appendix 1

Export potential (US$ billion)

Reporter	Partner	Actual	Potential
India	Bangladesh	5.67	36.46
India	Bhutan	0.37	0.08
India	Myanmar	1.14	14.55
India	Nepal	4.53	2.03
India	Sri Lanka	4.12	15.38
India	Thailand	2.96	192.76
Bangladesh	India	0.68	37.23
Bangladesh	Bhutan	na	na
Bangladesh	Myanmar	0.02	15.67
Bangladesh	Nepal	na	na
Bangladesh	Sri Lanka	0.03	19.47
Bangladesh	Thailand	0.06	37.85
Bhutan	India	0.13	0.01
Bhutan	Bangladesh	na	na
Bhutan	Myanmar	na	na
Bhutan	Nepal	na	na
Bhutan	Sri Lanka	*	0.14
Bhutan	Thailand	*	0.14
Myanmar	India	1.04	10.63
Myanmar	Bangladesh	0.02	11.65
Myanmar	Bhutan	*	0.46
Myanmar	Nepal	*	6.55
Myanmar	Sri Lanka	*	11.66
Myanmar	Thailand	2.24	9.43
Nepal	India	0.38	0.33
Nepal	Bangladesh	na	na
Nepal	Bhutan	na	na
Nepal	Myanmar	*	0.71
Nepal	Sri Lanka	*	0.71
Nepal	Thailand	*	0.71
Sri Lanka	India	0.76	9.79
Sri Lanka	Bangladesh	0.12	10.43
Sri Lanka	Bhutan	*	0.46
Sri Lanka	Myanmar	*	10.54

(continued)

(continued)

Reporter	Partner	Actual	Potential
Sri Lanka	Nepal	*	6.55
Sri Lanka	Thailand	0.03	10.51
Thailand	India	5.12	208.47
Thailand	Bangladesh	0.93	41.21
Thailand	Bhutan	0.02	0.43
Thailand	Myanmar	4.14	11.55
Thailand	Nepal	0.06	6.48
Thailand	Sri Lanka	0.43	19.07

Notes *Very negligible trade. na—not available
The indicative potential trade has been computed for each 6-digit product. The supply is represented by the exports of the selected country to the world. The demand is represented by the imports of the selected partner country from the world. The minimum between the two from which the bilateral trade is subtracted is the indicative potential trade. In a formal way, the unrealised trade potential for any commodity between India and Mongolia is given by [Min (Yi, Xj)—Zij], where Yi, Xj and Zij are country i's global exports, country j's global imports and existing trade between the country i (exporter) and country j (importer), respectively. Products having trade potential were identified as those with (a) adequate demand in the importing country and (b) adequate supply capabilities in the exporting country. The caveat is that the estimates of trade potential have to be treated with caution as they are merely indicative of the untapped trade possibilities. The estimate of trade potential is the maximum possible trade that two countries can have if they sourced all items from each other which they sourced from the rest of the world, ceteris paribus. The estimates also vary depending on the year of reference
Source ITC Trade Map based on www.trademap.org

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Chapter 3
Three Decades of SAARC and the Unfinished Agenda of Regional Integration

Rajan Sudesh Ratna

1 Introduction

The idea of regional cooperation in South Asia was first mooted in May 1980 by the then President of Bangladesh who addressed letters to the Heads of Governments of South Asia, stating his vision for the regional cooperation in the context of emerging international scenario. The Foreign Secretaries of seven countries in South Asia met for the first time in Colombo in April 1981 and identified five broad areas for regional cooperation. A series of meetings followed in Nepal (Kathmandu/November 1981), Pakistan (Islamabad/August 1982), Bangladesh, India (Delhi/July 1983) to enhance regional cooperation. The next step of this process was the Foreign Ministers meeting in New Delhi in 1983, where they adopted the Declaration on South Asian Regional Cooperation (SARC). The First SAARC Summit held on 7–8 December in 1985 in Dhaka, where the Heads of State or Government of seven countries, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, adopted the Charter formally establishing the South Asian Association for Regional Cooperation (SAARC). Afghanistan has also become a member of SAARC.

2 Regional Integration

Initially, SAARC's activities were confined to nine areas of regional cooperation, and the area of economic cooperation was deliberately kept outside its purview. In the early 90s, there was a surge in regional arrangements. The experience of the growth and consolidation of various regional blocks brought to fore the realization

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that core economic areas need to be brought within the scope of SAARC activities if the objective of bringing about accelerated social and economic development in the region through mutual cooperation was to materialize. The Sixth Summit of the Heads of the States or Governments declared their commitment to initiate cooperation in economic areas initially in trade and agreed to formulate an agreement on an institutional framework for trade liberalization among themselves. Recognizing its great economic strength in terms of its market potential, rich natural resources and capable human resources, and the possibility of enhanced intra-regional trade and investment flows, a trade block among SAARC members was formed with the signing of SAARC Preferential Trading Arrangement (SAPTA) during the Seventh Summit held in Dhaka in April, 1993. The Agreement reflected the desire of the Member States to promote and sustain mutual trade and economic cooperation within the SAARC region through the exchange of concessions. The SAPTA Agreement made a distinction between the least developed and other developing member countries with the former consisting of Bangladesh, Bhutan, Maldives and Nepal and the latter consisting of India, Pakistan and Sri Lanka.

Since SAPTA was a preferential trade agreement, during each round, the negotiations for SAPTA were held on the basis of 'request and offer' approach, where the exporting Party came up with a 'country-specific' request list of its exportable (real as well as potential) items on which it would seek preferential market access. The other Party would then make an offer on items from 'request list' and indicate the extent of tariff concessions in terms of Margin of Preference (MoP). In each round, the coverage of products under tariff concessions were expanded, and the MoP on products under tariff concessions was also increased. At the end of each round, these offers were multilateralized to all SAARC members which thereby expanded the items on which concessions were offered by each member. The least developed country (LDC) members got concessions on a large number of products with deeper MoP, without reciprocating with equivalent concession to other developing countries under the special and differential treatment (S&DT) provision of SAPTA. In four rounds of negotiations that were held under SAPTA, tariff concessions on around 5000 products at 6-digit HS level were exchanged. It has been found that though a number of products exported by LDC member were limited, tariff concessions were made available to them on a wide range of products. The opportunity to expand the basket of products for exports to SAARC member countries (SMC) was not fully utilized. Few attribute this to the NTBs imposed by other members, some cite the supply-side constraints of LDC members, and some other cite the lack of intra-regional investment flows and the absence of backward–forward linkages among the industries.

SAPTA was initially viewed as an instrument that can transform the South Asian trade landscape through a greater regional integration. This optimism began to wane with the slow progress of SAPTA under the four rounds of trade negotiations, as it did not increase the volume of intra-regional trade and investment flows. This was mainly because of the irrelevance of tariff preferences extended to a country's trading interest, limited depth in tariff cuts and prevalence of non-tariff barriers (NTBs). Contrary to the belief of many, the rules of origin of SAPTA were much liberal, as a product would

be originating if it generates a local value-added content of 40% (30% for LDCs) in the exporting country. This also included profit made not only by the manufacturers but also the traders. The non-qualifying/minimal operations confined to packaging and transportation operations only. For SAFTA to be successful, therefore, several lessons from SAPTA need to be learnt so that they are not repeated in SAFTA.

The decision for having a Free Trade Area (FTA) in SAARC was taken in the 9th SAARC Summit in May 1997 in Male. At the 10th SAARC Summit held in Colombo in July 1998, the Heads of the SAARC States/Governments decided to set up a Committee of Experts (COE) to draft a comprehensive treaty framework for creating a free trade area within the region, taking into consideration the asymmetries in development within the region and bearing in mind the need to fix realistic and achievable targets. Subsequently, at the 11th SAARC Summit held in Nepal in January 2002, the Heads of State or Government directed the Council of Ministers to finalize the text of the Draft Treaty Framework by the end of 2002.

The Committee of Experts first met in August 1999, but it took four years to reach an agreement on South Asian Free Trade Area. The Agreement of South Asian Free Trade Area was signed on 6 January 2004, during the Twelfth SAARC Summit in Islamabad and was implemented with effect from 1 January 2006, though the tariff liberalization started from 1 July 2006. This had happened since the sensitive lists, rules of origin, mechanism for compensation of revenue losses for LDCs and areas for technical assistance were negotiated subsequently, and there was a delay in commencement of trade liberalization programme due to procedural requirements for ratification of the Agreement. Despite the delay in its start, it was also agreed that time frame for reduction of tariffs would remain unchanged.

3 SAFTA: Trade Liberalization Programme (TLP)

The Agreement provides for the following schedule of tariff reductions:

(a) **Non-least Developed Country (Non-LDC) Members of SAARC (India, Pakistan and Sri Lanka)**: Non-LDC countries would reduce their existing tariffs (for MFN tariffs more than 20%) to 20% within a time frame of two years from the date of coming into force of the Agreement. If the actual MFN tariff rates are below 20%, then there shall be an annual reduction of 10% on Margin of Preference basis for each of the two years. The subsequent tariff reductions from 20% or below to 0–5% shall be done within of the next five years by India and Pakistan and six years by Sri Lanka. Therefore, the TLP allowed the tariffs to be reduced to 0–5% in a total time frame of seven years to India and Pakistan, and eight years to Sri Lanka.

(b) **Least Developed Country (LDC) Members of SAARC (Bangladesh, Bhutan, Maldives and Nepal)**: The LDC member countries would reduce their existing tariff (for MFN tariff more than 30%) to 30% within a time frame of two years from the date of coming into force of the Agreement. If the MFN

Table 1 Tariff reduction plan under SAFTA: first phase

Countries	Existing tariff rates[a]	Tariff rates proposed under SAFTA	Time schedule (from 1.1.2006)
Developing countries	More than 20%	20% (maximum)	Within 2 years
	Less than 20%	Annual reduction of 10%	Each of 2 years
Least developed	More than 30%	30% (maximum)	Within 2 years
Countries	Less than 30%	Annual reduction of 5%	Each of 2 years

[a]The tariff rates on the date of enforcement of SAFTA
NB All tariff rates are applied tariff rates and not Bound Tariff Levels
Source SAARC Secretariat

Table 2 Tariff reduction plan under SAFTA: second phase

Countries	Existing tariff rates	Tariff rates proposed under SAFTA (%)	Time schedule (from 1.1.2008)
India Pakistan	20% or below	0–5[a]	Within 5 Years
Sri Lanka	20% or below	0–5[a]	Within 6 Years
Least developed countries	30% or below	0–5[b]	Within 8 Years

[a]In equal annual instalments, but not less than 15% annually
[b]In equal annual instalments, but not less than 10% annually
Source SAARC Secretariat

tariff rates are below 30%, there will be an annual reduction of 5% on Margin of Preference basis for each of the two years. The subsequent tariff reductions from 30% or below to 0–5% shall be done within the next eight years, thus allowing them a time frame of a total of ten years to reduce their tariffs to 0–5%.

The two phases of Tariff Liberalization Programme as envisaged in the SAFTA Agreement are summarized in Tables 1 and 2.

Notwithstanding the above provisions, the Non-LDC Member States shall reduce their tariffs to 0–5% for the products of the LDC Member States within a period of ***three*** years beginning from the date of coming into force of the Agreement.

4 Sensitive Lists

The Agreement provides member countries to maintain sensitive lists, consisting of items which are not subject to tariff reduction (Table 3). The size of sensitive list was negotiated in COE, and it was agreed that it would be 25% of the total number of items at 6-digit HS level. The Agreement also provides that LDCs can seek derogation for removal of items of their export interest from the sensitive list

Table 3 Initial sensitive lists among the SAFTA members

Country	Total number of sensitive list		Coverage of sensitive list as % of total HS lines	
	For non-LDCs	For LDCs	For non-LDCs	For LDCs
Bangladesh	1254	1249	24.0	23.9
Bhutan	157	157	3.0	3.0
India[a]	865	744	16.6	14.2
Maldives	671	671	12.8	12.8
Nepal	1335	1299	25.6	24.9
Pakistan	1191	1191	22.8	22.8
Sri Lanka	1079	1079	20.7	20.7

[a]India subsequently reduced the sensitive list for LDCs voluntarily
Source SAARC Secretariat

of developing country members. This meant that a SAARC member could maintain two sets of sensitive lists: a larger list for the non-LDC members and a shorter list for the LDC members. However, only three members, namely Bangladesh, India and Nepal, maintain different sensitive lists for LDCs and Non-LDCs. Besides, the LDCs were allowed to maintain a bigger size of sensitive lists than the Non-LDCs. The sensitive lists are subject to review after every four years or earlier with a view to reducing the number of items which are to be traded freely among the SAARC countries.

5 Rules of Origin

The rules of origin agreed under SAFTA are general (i.e. one criterion for all products) barring 191 products for which product specific rules were applied. Thus, SAFTA rules of origin prescribes for an application of twin criteria of sufficient transformation through a Change in Tariff Heading (CTH: change at 4-digit HS level between the non-originating inputs and the final export product) and achieving a local value-added content of at least 40% as a percentage of Free on Board (FoB) value. However, local value-added content requirement is lower for Sri Lanka and LDCs, which is 35% and 30%, respectively. There are detailed minimal/non-qualifying operations, unlike SAPTA because this was an FTA. Therefore, the rules of origin of SAFTA is stringent than SAPTA. There is also a provision relating to Regional Cumulation wherein inputs from other SAARC members can be sourced. Under this provision, a higher value-added content of 50% for entire region has been prescribed out of which 20% valued-added content should be done in the exporting country. The condition of CTH applies on the non-originating inputs. In order to avoid fraudulent practices, detailed operational certification procedures have been adopted.

6 Non-Tariff and Para-Tariff Barriers

Agreement provides that no quantitative restrictions would be maintained by SARC members, if they are not allowed under GATT 1994. With respect to other non-tariff measures and para-tariff measures, the Agreement prescribes that the countries notify their measures to SAARC Secretariat on an annual basis and SAFTA COE will review them and make necessary recommendations for their elimination. The Agreement further prescribes that the initial notification shall be made within three months from the date of coming into force of the Agreement and the COE shall review the notifications in its first meeting and take appropriate decisions. For its implementation, a sub-group on non-tariff measures has already been established, which is engaged in addressing the non-tariff barriers. Not much progress has been made on removal of para-tariffs so far and even the progress to address NTMs is very slow.

7 Mechanism for Compensation of Revenue Loss

A mechanism was established to compensate the revenue loss to be incurred by the LDCs due to reduction of tariffs. The mechanism for compensation of revenue loss (MCRL) for the SAARC LDCs prescribes:

a. The compensation to LDCs would be available for four years. However, for Maldives, it would be available for six years.
b. The compensation would be in the form of grant in US dollar.
c. The compensation shall be subject to a cap of 1, 1, 5 and 3 per cent of customs revenue collected on non-sensitive items under bilateral trade in the base year, i.e. average of 2004 and 2005.
d. The compensation shall be administered by the COE.

This scheme initially generated a lot of attention when the SAFTA was signed but upon its finalization, it did not appear to have met the expectations of LDC members due to limited scope and period. By the time the LDCs would grant duty-free market access to other members of SAFTA, thereby incurring major revenue losses, the mechanism will no longer be in place.

8 Technical Assistance for LDCs

There are provisions for technical assistance for LDCs at their request. Areas of Technical Assistance as agreed upon are as follows:

- Capacity building (trade related)
- Customs procedure-related measures

- Development and improvement of tax policy and instruments
- Legislative and policy-related measures, assistance for improvement of national capacity
- Studies on trade-related physical infrastructure development, improvement of banking sector, development of export financing.

9 Other Areas

In addition to the above core areas, the Agreement also provided for the following:

(i) **Trade facilitation**: The Agreement prescribes for harmonization of standards, reciprocal recognition of tests and accreditation of testing laboratories, simplification and harmonization of customs procedures, customs classification of HS coding system, import licensing and registration procedures, simplification of banking procedures for import financing, transit facilities for efficient intra-SAARC trade, macro-economic consultations, development of communication systems and transport infrastructure and simplification of business visas.

(ii) **Institutional mechanism**: SAFTA Ministerial Council (SMC) is the highest decision-making body and is responsible for the administration and implementation of the Agreement. The SMC is supported by a Committee of Experts (COE) which will monitor, review and facilitate implementation of the provisions of the Agreement.

(iii) **Safeguard measures**: To protect the domestic industry from surge in imports of products covered under SAFTA concessions causing or threatening to cause serious injury to the domestic industry due to increased preferential import, the Agreement provides for a partial or full withdrawal of preference granted for a period of maximum 3 years. Safeguard measures cannot be applied against the product of LDCs if share of import from an LDC of the product concerned in total import of importing country is less than 5%.

(iv) **Dispute settlement mechanism**: The Agreement provides for settling the disputes that may arise due to the interpretation and application of the provisions of the SAFTA or any instrument adopted thereunder. It provides for a bilateral consultation to be held within 30 days upon a request made by any member. If dispute cannot be settled through bilateral consultation, the matter will be referred to the COE for its recommendation within 60 days. The COE may consult with a panel of experts for peer review. Any decision of the COE can be appealed to SMC for its decision within 60 days. The decision of the SMC will be final.

10 SAARC Agreement on Trade in Services (SATIS)

At the Sixteenth SAARC Summit, the SAARC Agreement on Trade in Services (SATIS) was signed in 2010. The Leaders expressed the hope that this will open up new vistas of trade cooperation and further deepen the integration of the regional economies. The Leaders called for an early conclusion of negotiations on the schedules of specific commitments under the Agreement. The Agreement has been ratified by all Member States and has entered into force on 29 November 2012.

Not much information is available on its implementation, however as per the SAARC Secretariat note,[1] so far, eleven Meetings of the Expert Group on SATIS have been held. The Eleventh Meeting of the Expert Group held in Islamabad on 5 July 2015, noted that only Afghanistan, Bangladesh, Bhutan, India and Nepal are ready with their Final Offer Lists and are ready for tabling of these Final Offers. Subsequently, Maldives and Sri Lanka also informed that they are also ready with their Final Offer Lists under SATIS. This confirmation is still awaited from Pakistan. Once confirmation from all Member States has been received, these Lists would be forwarded to the SAARC Secretariat by all Member States for circulation among all Member States in one go. These Final Offer Lists were to be examined by the Member States and subsequently tabled during the Twelfth Meeting of the Expert Group.

It appears that no further progress in SATIS has taken place. It is important to note that due to lack of progress in the integration of SAARC, in their Eighteenth SAARC Summit held in Kathmandu on 26–27 November 2014, the Heads of State or Government renewed their commitment to achieve South Asian Economic Union (SAEU) in a phased and planned manner through a Free Trade Area, a Customs Union, a Common Market, and a Common Economic and Monetary Union. They also agreed to effectively implement the existing preferential facilities under SAFTA and SATIS and directed SAFTA Ministerial Council and SAFTA Committee of Experts to accelerate free trade in goods and services in the region putting into operation simplified and transparent rules of origin; implementation of trade facilitation measures; harmonization of standards relating to Technical Barriers to Trade (TBT) and sanitary and phyto-sanitary measures; harmonized, streamlined and simplified customs procedures; elimination of non-tariff and para-tariff barriers; and smooth and efficient transit and transport facilities. They also called for early operationalization of SATIS by finalizing the schedule of commitments.[2]

[1] Source: SAARC Secretariat, available at http://saarc-sec.org/areas_of_cooperation/area_detail/economic-trade-and-finance/click-for-details_7 accessed on 22 January 2018.

[2] Source: ibid.

11 Intra-SAARC Trade

The trade among SAARC members has been low since the signing of SAFTA. Intra-SAARC imports have been in the range of 2–3% of its global imports. Only the LDCs (Bhutan and Nepal) show a high rate of imports from other SAARC members, and other members show moderate or low share of imports from other SAARC members, with India showing the least intra-SAARC imports (Fig. 1). It must also be noted that these are total import figures and do not reflect the preferential import or export data under SAFTA. A low level of intra-SAARC imports is due to several factors which include keeping high trade items in sensitive list and thus not giving any tariff concessions, shallow tariff concessions (keeping duties to 5% and not making it a zero duty regime), supply-side constraints of exporting countries (mostly for the LDCs), infrastructural bottlenecks especially at borders, non- or para-tariff measures which make trade costly within the region (compared with rest of world) and associated high trade cost.

However, the above analysis shows a different pattern if one analyses each member's total exports to SAARC and exports to SAARC under SAFTA from the period July 2006 to June 2013 which shows varying utilization rates. Four countries (Bhutan, Nepal; Afghanistan and Maldives) almost never reported exports under SAFTA. Bangladesh, India, Pakistan and Sri Lanka consistently exported under SAFTA. Figure 2 shows that of these, exports to SAARC under SAFTA ranged from Sri

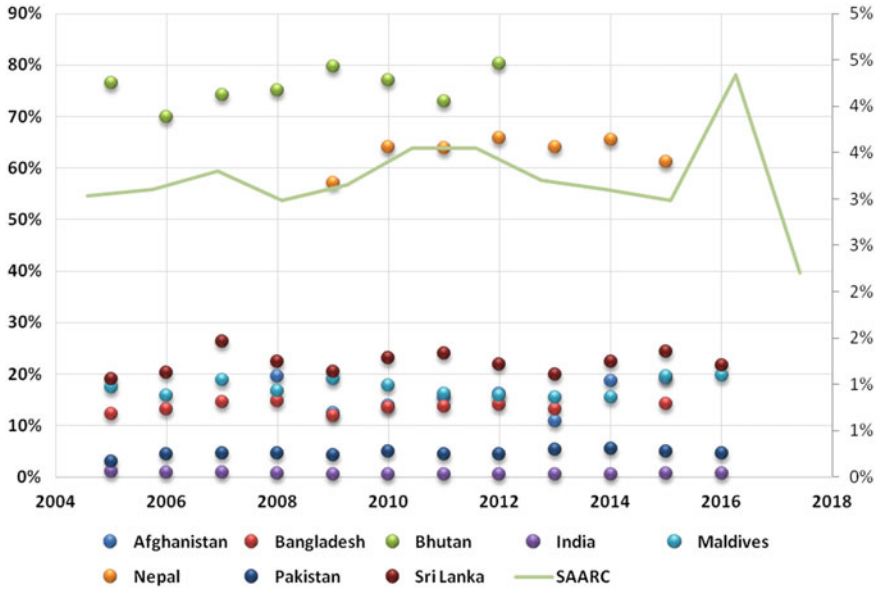

Fig. 1 Intra-SAARC imports. *Source* Author, calculated on the basis of UN Comtrade database accessed through WITS

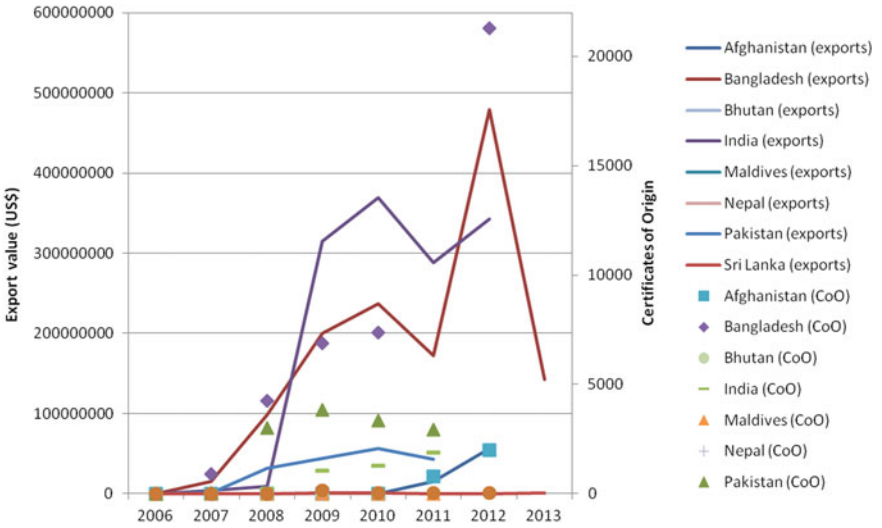

Fig. 2 Exports under SAFTA and preferential CoO issued

Lanka's (at most 0.14%) to Bangladesh's (at most 50.87%). Figure 2 also illustrates the SAARC members' exports under SAFTA and issuance of CoO over time.

From the above figure, it can be observed:

(i) Bhutan did not report exports under SAFTA. Exports to India account for about 92% of Bhutan's total exports to SAARC, and Bhutan has bilateral trade agreements with India with better preferences than those under SAFTA.

(ii) Nepal reported no exports under SAFTA. Nepal's exports to India make up about 90% of its total exports to SAARC, and it also has a bilateral trade agreement with India preferable to SAFTA.

(iii) Afghanistan reported exports under SAFTA for only two six-month periods. Afghanistan's exports to Pakistan and India together make up essentially 100% of its trade with SAARC, and it has bilateral trade agreements with both countries.

Being LDCs, these three countries are also eligible for India's DFQF scheme. Thus, although Bhutan, Nepal and Afghanistan do not utilize SAFTA, it may not be because they are forgoing the cost of requesting preferences and paying MFN tariffs; rather it might be because they receive better benefits either under a bilateral FTA or DFQF Scheme.

(iv) Bangladesh has by far the highest utilization rate of SAFTA, at most 54.79% in 2009 and most recently 54.75% in 2010. This would imply that Bangladesh exporters find that the margin of preference far exceeds the cost of obtaining preference. Bangladesh does not have bilateral agreements with any South Asian countries, so utilizing SAFTA is its only avenue for preferential trade

with the region, except its exports to India which might be influenced by DFQF scheme of India.

(v) Maldives reported exports under SAFTA for only one six-month period. It is an exception among the four countries that do not utilize SAFTA. Maldives' exports to Sri Lanka account for about 85% of its total exports to SAARC. Maldives' primary export to Sri Lanka is fish. Fish, under four tariff headings, happens to be on Sri Lanka's sensitive list for non-LDCs, meaning that fish exports to Sri Lanka are not eligible for SAFTA preferences. Thus, the majority of Maldives' exports to South Asia and to Sri Lanka in particular are not even eligible for preference, which might explain why Maldives does not export under SAFTA.

(vi) The proportion of Sri Lanka's exports to SAARC that utilized SAFTA preferences was at most 0.14%, in fiscal year 2009, and most recently 0.02% in fiscal year 2011. India and Pakistan together make up almost 90% of Sri Lanka's exports to SAARC; they are the only two countries to which Sri Lanka has consistently exported under SAFTA. They are the two countries with which it has bilateral trade agreements, and Sri Lanka also participates in APTA along with India. However, the extremely low volume of Sri Lanka's exports under SAFTA suggests that the majority of its exports to SAARC are under bilateral trade agreements.

(vii) In 2009, Pakistan's exports under SAFTA peaked at 1.98% of its total South Asian exports, and they were 1.02% in 2011. Over two-thirds of Pakistan's exports to SAARC are to Afghanistan and Sri Lanka, but under SAFTA Pakistan only exports to India. This is because Pakistan has favourable bilateral trade agreements with Afghanistan and Sri Lanka, but no bilateral agreement with India. Pakistan's utilization of SAFTA with India is higher, 15.8% in 2011.

(viii) India's exports under SAFTA made up 6.68% of its total exports to SAARC, at the highest and most recent data point in fiscal year 2009. About 93% of India's exports to South Asia go to Bangladesh, Nepal, Pakistan and Sri Lanka. Over 99% of its exports under SAFTA are to the first three countries, and it has a bilateral trade agreement with Sri Lanka, suggesting that India utilizes preferences, though still at low rates, with its most important South Asian partners.

It is therefore amply clear that the SAFTA has not been beneficial in enhancing regional integration in SAARC and is way behind in comparison to many other RTAs in the region. In addition, issues relating to NTMs, para-tariffs, infrastructural bottlenecks and other impediments to trade have not been given much attention and the progress is very slow. The South Asian Regional Standards Organization (SARSO), a SAARC Specialized Body, became operational in Dhaka with effect from 3 April 2014. Work on harmonization of standards in some identified products (refined sugar, biscuits, instant noodles, black tea, vanaspati, instant noodle, skimmed milk powder, etc.) has been progressing.[3] The draft SAARC Standards is being formulated by the

[3] *SAARC Secretariat available at* http://saarc-sec.org/areaofcooperation/detail.php?activity_id=47.

respective Sectoral Technical Committees. Yet, not only the progress is very slow, the coverage of very limited products for discussion is another impediment as these items hardly constitute major trade items within SAARC.

Another important aspect which needs a greater attention in SAARC is intra-regional investment flows, which also is very low. SAARC Investment Agreement can be an option to facilitate the intra-SAARC investment flows; however, this would also happen if majority of the sectors are liberalized for other SAARC members.

12 Way Ahead

It is indeed true that SAARC is much behind in its efforts of regional integration. This is despite the fact that there are many political declarations which have given directions, but a lack of a collective political will and the bilateral relations of India and Pakistan are two major reasons for the slow progress. As early as 2016, the Special Committee on Regional Economic Integration Study (Phase II) continued to discuss reduction/removal of NTMs and para-tariff barriers (PTBs), energy cooperation, trade facilitation measures, investment cooperation, reduction of sensitive list, SATIS, etc. Though timelines were recommended, the meeting of SAFTA Committee of Experts has not been held, which has delayed the process.

Given a plethora of RTAs that have emerged especially the mega RTAs and ASEAN centric RTAs, SAARC is a way behind these RTAs and thus is at the verge of losing its relevance on issues of trade and investment. A major challenge relates to the fact that one of its largest economies, India, is party to many other RTAs and even other members like Pakistan and Sri Lanka are moving ahead with other bilateral FTAs where commitments are much deeper and wider than SAFTA or SATIS, thereby making SAARC a least preferred RTA. For other members, especially the LDC members, this will pose a serious challenge in future. Not only will they face preference erosion, but a strong possibility exists of them being locked out of these markets in future as they will never be able to compete in the markets of SAARC with China, Japan, Republic of Korea as well as ASEAN members with which India, Pakistan and Sri Lanka are engaged in RTAs. This poses a daunting task to the SAARC members in their endeavour for regional integration.

It is therefore important that all unfinished agenda of SAARC regional integration are taken on priority and delivered in a fixed time frame irrespective of the political differences among the members. In this regard, a serious cutting down of sensitive list, including by the LDC members; taking deeper and wider commitments in trade in services and investments; providing a transparent and effective mechanism to remove NTMs and PTMs would be essential. To deliver on the work programme of SAARC in a timely manner, the Summit meeting should start monitoring the deliverables on these issues to signal a strong political signal. Unless a top-down approach is followed in SAARC, its delivery will always be doubtful.

Chapter 4
Harnessing the Potential of Regional Value Chains for Sustainable Development in Southern Asia: *Towards a South Asia Comprehensive Economic Partnership (SACEP)*

Nagesh Kumar and Joseph George

1 Introduction

Regional economic cooperation and integration has assumed a new urgency for countries in Southern Asia in the aftermath of the global financial crisis with the advanced economies, traditional locomotives of the world economy, facing a new normal of slowdown. With the emergence of Asian countries as new engines of global growth, regional and subregional economic integration becomes a more viable strategy for sustaining dynamism through regional value chains and generating resources for pursuing the Sustainable Development Goals (SDGs) in South Asia. Shared vulnerabilities of South Asian countries in terms of food and energy security, disaster risks and many different manifestations of climate change also call for regionally coordinated responses.

The South Asian subregion has lagged behind in harnessing the potential of regional cooperation and integration and is often characterized as the least integrated in the Asia-Pacific region, with intraregional trade accounting for only 5.9% of total trade in 2017, which is appallingly low in comparison with 26.9% in the Association of Southeast Asian Nations (ASEAN).[1] Inability to harness the opportunities of cooperation in South Asia, partly due to trade barriers, infrastructural deficits and chronic political differences, costs the subregion around two-thirds of its

[1] UNESCAP based on UN Comtrade (2019).

[2] See UNESCAP (2018a).

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intraregional export potential annually ($54.5 billion in 2014) by way of lost export opportunities, as per UNESCAP projections.[2]

South Asian countries have much to gain from sharing resources and knowledge and deepening economic integration not only in the subregion, but also in the broader region. This would allow them to maximize their strategic geographic location at the confluence of Central Asia and Southeast Asia in the Eurasian continent. Through improved connectivity within the subregion and with contiguous subregions, South Asia can emerge as an important hub of trade between Europe and Central Asia on the one hand and Southeast and East Asia on the other, thereby contribute to broader regionalism in Asia and the Pacific.

Drawing on UNESCAP's recent work, this paper discusses how South Asian countries can capitalize on opportunities of greater economic integration through a comprehensive economic partnership. It concludes with a brief discussion of the prospects available for South Asian countries to play a stronger role in broader regionalism in Asia and the Pacific.

2 Patterns of Trade in South Asia and Potential for Regional Integration

The global financial crisis has deeply affected the growth and patterns of global trade since 2008. The most important factor has been a dramatic decline in the growth of world trade to an average of 1.8% per annum in the post-crisis years compared to 12.6% during 2003–2007.[3] The softening of commodity prices and the slowdown in the Chinese economy have also affected world trade.[4] The average rate of trade growth of South Asian countries has declined from 22% during 2003–2007 to 8.1% during 2008–2015. However, trade has grown faster than GDP, resulting in an increase in the trade-to-GDP ratio of South Asia from 28.8 to 50.6% during 2000–2015 (UNESCAP 2018a). In fact, South Asia has recorded the fastest increase in exports-to-GDP ratio among developing regions since 1990.[5]

Trade had clearly emerged as one of the key drivers of growth in the subregion, underlining the importance of trade policies for future prospects.[6] Recent trends of trade-to-GDP ratios among South Asian countries show either deceleration or a marginal decline only in the cases of Pakistan and Sri Lanka, despite a steady

[3] See World Trade Statistical Review (WTO 2019).

[4] See UNESCAP (2016, 2018b).

[5] See World Bank (2014). Merchandise export-to-GDP ratio of South Asia grew by 173% since 1990, overtaking that of Latin America and the Caribbean in 2013.

[6] Per capita income growth along with human capital, financial and infrastructural development played their part in mutually reinforcing trade growth and domestic economic development. See Goswami (2013) for a Panal data exposition for South Asia for the period 1980–2010 to find income growth and infrastructure as key determinants of trade growth.

increase in their trade volumes in absolute terms, suggestive of relatively less intense trade-oriented growth strategies pursued in these two countries.[7]

South Asia's trade in services has grown even faster and produced a more favorable balance than their merchandise trade, reflecting a transformation in the service industry. The subregion's share of service exports globally has surged from 2.8 to 4.7% in only 11 years. Sectoral composition of the subregion's services trade shows inter-country differences in competencies spread across IT and communication services, transport, travel and tourism, construction and business services. Services trade boom has been concentrated in transport and travel for tourism-dependent economies such as the Maldives, Bhutan, Nepal and Sri Lanka. Growth in trade of IT-enabled services, which contributed 42% of India's total services exports in 2014, has been an important factor for India taking the lead in export of services from the subregion. Divergence of comparative advantages in services exports across South Asian countries is indicative of potential opportunities for enhancing intra-subregional services trade which is yet to be leveraged (UNESCAP 2018a).

3 Potential of Regional Economic Integration in Southern Asia

The pace of growth of intraregional trade in South Asia has remained slow despite the fact that the subregional countries have established a number of institutional frameworks to promote regional economic integration over the past three decades. The most comprehensive is the South Asian Association for Regional Cooperation (SAARC), established in 1985, which brings together all eight South Asian countries. It adopted a programme of economic cooperation in 1991 and four years later created the SAARC Preferential Trading Arrangement (SAPTA). In 2004, the Agreement on South Asian Free Trade Area (SAFTA) was established under SAARC, with the vision of implementing a borderless economic zone by way of elimination of tariffs on traded goods between 2006 and 2016.[8] At the 16th SAARC Summit in Bhutan in 2010, SAARC adopted the SAARC Agreement on Trade in Services (SATIS) and created the US $300-million SAARC Development Fund with social, economic and infrastructure windows.

Other overlapping frameworks for regional cooperation include the Economic Cooperation Organization (ECO) in which two of the ten members—Afghanistan and Pakistan—are SAARC countries. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) involves five countries in South

[7]Battarai (2011) notes countries with strong export-oriented growth strategies such as India, Bangladesh and Maldives have steadily raised the share of exports in GDP compared to Sri Lanka and Pakistan. Also see Athukorala and Jayasuriya (2012) for a critique on Sri Lanka's focus shifts from trade liberalization.

[8]However, tariff liberalization under SAFTA still remains an unfinished agenda. For current status and the ongoing process under SAFTA Tariff Liberalization Programme (TLP), see SAARC (2015). Also see section 1.4 (a) of this report for an exposition on this issue.

Asia (Bangladesh, Bhutan, India, Nepal and Sri Lanka) and two countries in Southeast Asia (Myanmar and Thailand). Another multilateral framework for preferential trade is APTA, originally named the Bangkok Agreement, which was negotiated under the auspices of UNESCAP and signed in 1975 between Bangladesh, India, the Lao People's Democratic Republic, the Republic of Korea and Sri Lanka. China joined APTA in 2000. A year before APTA was established, UNESCAP had also helped to establish the Asian Clearing Union, a payment arrangement to ease central bank transfer and foreign exchange costs for its nine members, viz Bangladesh, Bhutan, India, the Islamic Republic of Iran, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka.

ECO, SAARC and BIMSTEC address various issues covering trade, investment and transport connectivity through specific agreements, regular work programmes of their respective secretariats, specialized institutions created by them and other related initiatives. ECO has adopted a preferential trade arrangement, viz ECO Trade Agreement (ECOTA) of 2003 and has established an ECO Bank. While tariff liberalization in the ECO region is in progress under ECOTA, some of the critical non-tariff impediments to trade, particularly those related to shortfalls in trade and transport facilitation, are addressed through ECO Transit Trade Agreement (TTA) and ECO Transit Transport Framework Agreement (TTFA).

In the framework of SAARC, SAFTA remains the principal framework for trade liberalization. However, tariff reduction under SAFTA has been undermined by the large sensitive lists that the member states have generally maintained to exclude products from preferential treatment, especially for non-LDCs. Implementation of SATIS for liberalization of trade in services through requests and offers is at an early stage. Under SAARC framework, a South Asian Regional Standards Organization (SARSO) has been established in Dhaka and Working Groups have been created for financial cooperation and customs reforms, as well as the conceptualization of SAARC transport corridors to address issues of connectivity and non-tariff barriers to trade although progress has been uneven.

After its establishment in 1997, BIMSTEC took more than 15 years to establish its permanent secretariat in Dhaka, Bangladesh. The regular work programmes under BIMSTEC, particularly in the areas of trade and transport, are currently under progress with a renewed interest following the retreat of BIMSTEC leaders held in India in October 2016.

These intersecting arrangements are complemented by a number of bilateral preferential transit and trade, or free trade arrangements as between India and Nepal, Bhutan and India; India and Sri Lanka; Afghanistan and Pakistan; and Pakistan and Sri Lanka. But, SAFTA is the only overarching subregional trade agreement that brings together all of the South Asian countries under a functioning FTA.

In spite of trade liberalization under SAFTA, intraregional trade in South Asia is less than one-third of its potential as estimated by UNESCAP South Asia Gravity Model of intraregional trade (Table 1). The UNESCAP model demonstrates that the potential of intraregional exports in 2014 was $81.2 billion. However, only $26.8 billion was realized in that year leaving over 67% of trade potential underexploited. Furthermore, the model estimations indicate that intraregional exports potential could

Table 1 Unexploited trade potential in South and Southwest Asia (2014, in millions of US$)

Reporter	Actual exports to South Asian countries	Potential exports	Unexploited potential	Unexploited potential (%)	Potential exports 2020
Afghanistan	398.13	2397.44	1999.30	83.39	4609.35
Bangladesh	532.70	7735.21	7202.51	93.11	24651.03
Bhutan	521.70	573.36	51.67	9.01	732.11
India	20486.20	41151.71	20647.34	50.17	81908.46
Maldives	13.61	110.16	96.56	87.65	332.07
Nepal	569.65	2390.08	1820.42	76.17	6386.69
Pakistan	3403.73	24479.83	21157.31	86.43	47466.82
Sri Lanka	880.96	2326.64	1445.68	62.14	6476.40
South Asia	26806.67	81164.43	54420.78	67.05	172562.92

Source UNESCAP (2018a)

more than double by 2020 to an estimated $172 billion. Bangladesh has the highest unexploited proportion, at 93%, followed by the Maldives (88%), Pakistan (86%), Afghanistan (83%) and Nepal (76%). The computations also show that bilateral trade between India and Pakistan could be twelve times its current value, which in 2014 was $2.6 billion. Trade barriers, including high trade costs, as well as the lack of capacity to supply goods being demanded by neighboring countries have contributed to unexploited trade potential in the subregion. Greater regional cooperation could facilitate the development of complementary and mutually beneficial export sectors by focusing on lowering trade barriers.

The low level of intraregional trade is not indicative of the low level of complementarities between countries, rather it demonstrates the absence of strategic policies to tap into proximate sources of increased income. SAFTA and other regional agreements harbor the potential to create greater economic linkages, leading to stronger growth and enhanced welfare for the poorer participating countries including Afghanistan, Bangladesh, Nepal, Bhutan and the Maldives. The experiences of the European Union and ASEAN have demonstrated that regional economic integration can create a more balanced and equitable regional development which benefits smaller and poorer parts of the region. In these regions, this has been achieved through a process of efficiency-seeking industrial restructuring across borders aimed at exploiting the economies of vertical specialization and regional value chains in a manner that leads to balanced regional development. Studies show that SAFTA has substantial potential of facilitating trade, leading to stronger growth and enhanced welfare for its participants, with the relatively poorer countries of Bangladesh, Bhutan, Nepal and the Maldives gaining the most benefits.[9]

Besides over two-thirds of the potential of intraregional trade, potential of trade in services and investments in South Asia also remains untapped. The main challenge

[9]See UNESCAP (2012).

to increasing economic activities between the SAFTA members is boosting and diversifying regional production networks, which remain undeveloped except for in a few sectors such as textiles and garments.

4 Challenges to Intraregional Trade in South Asia

The low level of intraregional trade can be explained in terms of a number of factors, as described below.

High level of informal border trade: The levels of intraregional trade may be higher than recorded in statistics due to informal trade, which has thrived in border areas. Countries in South Asia share long, porous borders, and the history, language and culture of geographically proximate communities tend to blur across politically-drawn boundaries in ways that facilitate informal trade regardless of formal ties between the two countries. UNESCAP analysis shows that figures of formal intraregional trade vastly underestimate the extent of trade, as official data cannot capture informal exchanges made by entrepreneurial communities at the frontiers.[10] Moving forward informal trade could be formalized through lowering the costs of formal cross-border trade.

High costs of intraregional trade: Costs of trading within South Asia remain high at 119.4% of the value of the goods being exported (Table 2), making trading with neighboring nations more expensive or less competitive, compared to trading with

Table 2 Intraregional and extra-regional trade costs in the Asia-Pacific region, excluding tariff costs (percentage ad-valorem)

	ASEAN-4	East Asia-3	North and Central Asia-4	SAARC-4	EU-3
ASEAN-4	76.2				
East Asia-3	77.6	53.3			
North and Central Asia-4	342.2	170.1	115.4		
SAARC-4	131.6	123.3	304.0	119.4	
EU-3	105.1	84.7	149.2	113.6	42.1
United States	86.7	64.3	176.0	113.1	66.9

Source UNESCAP (2018b), based on the UNESCAP-World Bank International Trade Costs Database

Notes The trade costs shown are average trade costs during 2008–2013 and may be interpreted as tariff equivalents

ASEAN-4 = Indonesia, Malaysia, the Philippines and Thailand; East Asia-3 = China, Japan and the Republic of Korea; EU-3 = France, Germany and the United Kingdom; North and Central Asia-4 = Georgia, Kazakhstan, Kyrgyzstan and the Russian Federation; SAARC-4 = Bangladesh, India, Pakistan and Sri Lanka

[10] Ibid. Chap. 4.

distant partners. Trade costs with distant trading partners, such as the USA and the European Union, are comparatively lower at about 113% each. This discourages formation of regional value chains despite the geographic contiguity. At 76.2%, intraregional trade costs for ASEAN are some 40% lower than intra-SAARC trade costs, creating high incentives for interdependence. Poorly developed land transportation infrastructure is a key reason behind high trade costs, and regional cooperation to facilitate transit would both dismantle this barrier and allow costs to be shared among benefitting nations.

Poor supply capabilities in LDCs: Trade imbalances between India and the SAARC countries also persist due to the poor capacity of least developed countries (LDCs) and other SAARC countries to supply products that would be of interest to India's import market. The productive capacities of South Asian LDCs have actually declined in terms of technical complexity and product variety when compared to other countries globally.[11]

The India–Sri Lanka FTA indicates that the potential SAFTA has to create balanced regional development and address the poor supply capabilities through FDI flows between FTA partners. The India–Sri Lanka FTA since its implementation in 2000 has led to a massive expansion of bilateral trade, while reducing imbalances by enabling Sri Lanka to export value-added goods often produced by Indian companies in Sri Lanka through FDI. By exploiting economies of scale and specialization, it is this kind of efficiency-seeking industrial restructuring that boosts supply capacities and jobs in lesser-developed locations and strengthens the overall competitiveness of products.

Poor trade facilitation at the borders: A number of non-physical barriers that hamper goods shipments across borders still pose significant challenges for regional integration. Excessive delays, high costs and uncertainties stemming from inconsistent and complex border-crossing procedures and documentation need to be addressed if South Asia is to reach its trade potential. Goods are often inspected on both sides of the borders by different authorities and sometimes during transit as well as at loading or unloading points. Unilateral measures have had a limited impact on improving transport facilitation, since gains on one side of the border may be lost on the other. The only way to ensure that such barriers are removed is through standardized procedures established bilaterally.

Non-tariff barriers: One of the most challenging and complex obstacles to further regional integration include non-tariff measures (NTMs), including quotas, standards and sanitary measures, testing, labelling and other requirements that are often poorly defined and classified. The application of NTMs has increased worldwide, partly in response to falling tariff barriers that governments fear will cause import surges. Measures that are not aligned with the existing bilateral, multilateral and regional agreements and are intentionally protectionist and distortive for free trade, are classified as non-tariff barriers (NTBs). But, NTBs can be hard to identify because they include licensing requirements, product standards and even labelling restrictions that prohibit or limit imports. According to ADB, as many as 86.3% of all NTMs

[11] See UNESCAP (2015a).

in SAARC countries were related to labelling and sanitary measures introduced to limit the spread of diseases.[12] Developing and implementing systematic approaches to identify NTBs and eliminate those which inhibit the free flow of trade must be the first step to reform. Mutual recognition agreements and harmonized conformity assessment procedures that could address NTBs should also be utilized moving forward.

5 Harnessing the Potential of Regional Value Chains in South Asia

A recent study by UNESCAP showed that active participation in global or regional value chains requires lowered trade costs, infrastructure development (including soft infrastructure), improved market access through regional trade agreements and the mutual recognition of standards.[13] Under the framework of SAARC and other multilateral arrangements, South Asia has developed a number of initiatives in recent decades, to facilitate trade. In order for South Asia to address the rapid development challenges that it now faces—including heightened vulnerability to climate change-induced natural disasters, unmet care for aging populations and unplanned urbanization leading to deteriorating quality of growth—the subregion must deepen and consolidate current arrangements under a new framework which creates synergies that foster the growth of regional value chains and strengthen South Asian participation in global markets.

Going forward, South Asia could move to a South Asia Comprehensive Economic Partnership (SACEP), proposed by UNESCAP (2018a) as a unifying framework consolidating different initiatives and building on them. The SACEP framework calls for focus on pulling together different aspects of South Asian progress to date to liberalize trade in goods and services as well as boost investment, transport connectivity, trade facilitation, among other aspects of partnership. It could also focus on harmonizing border procedures and import standards and facilitate payments, while addressing other NTBs as well. Various components of this composite policy framework and the existing and required subregional initiatives and policy actions for the fulfillment of its goals are discussed in the following subsections of this report.

(a) ***Advancing the liberalization of trade in goods***:

Despite several overlapping frameworks for trade liberalization, tariffs continue to obstruct trade. In South Asia, countries are making incremental progress towards the full implementation of the tariff liberalization agenda under the Tariff Liberalization Programme of SAFTA (Article 7). The number of items on sensitive lists, which limit trade expansion and undermine openness, has been reduced significantly for the subregional LDCs.

[12] See ADB and UNCTAD (2008).

[13] See UNESCAP (2015b).

The Working Group on Reduction in the sensitive lists under SAFTA (Phase-III) has a critical role to play in offering SAARC member countries guidance on phasing out items from sensitive lists without causing sudden disruptions to domestic industries.[14] In order to make the subregional tariff concessions meaningful, zero duty should be applied to at least 90% of the total product lines or "substantially all trade" in WTO parlance, which will mean countries have to substantially cut sensitive lists within an agreed-upon time frame of, for example, five years. In this context, India's initiative to reduce the sensitive list for the SAARC LDCs and to stamp out tariffs is encouraging. Other non-LDCs, such as Pakistan and Sri Lanka, may follow suit, with Pakistan already cutting its list by at least 233 items since August 2014. The sensitive lists for non-LDCs continue to be large, and they need to be phased out in an expedited manner. The other critical pending reform concerns the implementation of full non-discriminatory treatment to India's exports to Pakistan, which are currently governed by positive lists.

As estimated within the framework of UNESCAP-SANEM model, all member countries will benefit from the full implementation of the Trade Liberalization Programme. Minimum intraregional export gains to the tune of $3.5 billion may be expected from tariff elimination and reduction of trade costs by achievable targets. However, regional export and welfare gains will be particularly significant for smaller trading partners and LDC members of SAFTA, compared to those for the larger economies, such as India (Table 3). This pattern is consistent with observations from other regional groupings that demonstrate proportionately higher welfare and export gains for smaller trade partners as trade integration obviates limitations of smaller

Table 3 Estimated gains from trade liberalization and facilitation in South Asia

Country	Tariffs elimination				40% Reduction in trade costs			
	Welfare gains		Intraregional export gains		Welfare gains		Intraregional export gains	
	US$ million	% of GDP	US$ million	% of exports	US$ million	% of GDP	US$ million	% of exports
Bangladesh	173.15	0.25	34.70	5.51	5463.03	7.99	71.11	11.29
India	1950.44	0.16	263.82	1.33	16612.35	1.35	1063.23	5.36
Nepal	595.12	5.79	202.91	32.70	5831.39	56.71	657.75	106
Pakistan	433.34	0.30	155.90	4.82	4574.83	3.20	600.94	18.58
Sri Lanka	284.66	0.88	26.46	2.60	6943.42	21.46	123.36	12.12
Rest of South Asia	294.14	2.45	63.24	12.41	3808.53	31.69	215.19	42.23
South Asia	3730.85	0.25	747.03	2.89	43233.55	2.89	2731.58	10.57

Source UNESCAP-SANEM CGE Model Estimations
Note Global Trade Analysis Project simulation with closure of fixed wage rate of unskilled labor in South Asian countries

[14]The Working Group is mandated to devise modalities of reduction in the sensitive lists and to make its recommendations for the consideration of the SAFTA Committee of Experts.

markets. These estimates indicate particularly pronounced welfare gains for Nepal of close to 6% of GDP due to greater allocative efficiency gains from deeper tariff cuts.

(b) ***Strengthening transport connectivity and trade facilitation***:

As observed earlier, the high cost of intraregional trade is a major barrier that continues to stall the economic gains market integration that would bring. Cost of doing trade within and with South Asia is found to be comparatively higher than that of most other developing and least developed subregions of the world (Table 2). Even though South Asia is blessed with a long coastline and access to international shipping routes, the subregion's overall trade costs remain comparable to that of the landlocked countries of Central Asia which suffer from severe transport constraints. These are indicative of the fact that incidence of shortcomings related to both transport and trade facilitation is equally prevalent in the subregion, hurting its trade prospects.

Simulations conducted within the framework of the UNESCAP-SANEM South Asia Model suggest that a 40% reduction in trade costs (to make it comparable to ASEAN levels) would singularly generate a greater impact than trade liberalization in terms of exports and welfare gains, yielding up to nearly 11% increase in exports and a nearly 3% increase in GDP. The favorable effect would be even greater in the subregion's smaller countries, both in terms of GDP growth and welfare gains for the population (Table 3).

Trade costs could be lowered by improved surface transport infrastructure and facilitation at the borders that would take advantage of the geographic proximity. One important proposal for strengthening transport connectivity in Southern Asia not only to power its intraregional trade but also to exploit its strategic location at the crossroads of Europe and East Asia is Istanbul-Tehran-Islamabad—Delhi-Kolkata-Dhaka—Yangon (ITI-DKD-Y) container train corridor (UNESCAP 2012, 2018a; Kumar 2015). The corridor can be implemented by exploiting existing infrastructure and has been shown to substantial reduction in freight costs and time for containers across the subcontinent and beyond. With multimodal feeder links to landlocked countries including Afghanistan, Bhutan and Nepal and the Central Asian Republics and ports of the region, the ITI-DKD-Y corridor could become an important transport artery not only for promoting intraregional trade in South Asia but also as an important conduit of Asia's trade with Europe.

Trade facilitation measures to reduce or remove non-tariff, institutional, administrative, technical and procedural barriers to trade should be built around modern and effective customs administration, streamlined transparent trade processes and procedures, and improved services and information for private sector traders and investors. Though countries in South Asia have undertaken a number of unilateral trade facilitation measures in recent years, a holistic and structured trade facilitation programme at the regional level has yet to take shape. Several trade facilitation issues are outlined under Article VIII of SAFTA, but they have been left in the domain of "agree to consider."

The South Asian subregion still ranks among the lower rungs of Asia-Pacific subregions in terms of the implementation of trade facilitation measures.[15] The implementation of the WTO's Trade Facilitation Agreement (TFA) is one of the leading possible trade facilitation reforms that offer the opportunity to streamline and upgrade trade documentation and inspection procedures, as well as expediting the movement, release and clearance of goods, including goods in transit. India, Nepal, Pakistan and Sri Lanka have already ratified the TFA and other countries are expected to follow suit.

Most of the subregional countries are currently undertaking unilateral trade and transport facilitation reforms, which provide an enabling environment for such reforms at the regional level. Recent research by UNESCAP highlights the opportunity for South Asian countries to combine national and regional efforts for establishing a regional single window which integrates trade procedures into an easily accessible and unified system. Towards this goal, the new framework agreement on the Facilitation of Cross-Border Paperless Trade in Asia and the Pacific developed for the facilitation of electronic data exchange among UNESCAP member states in 2016 can assist member states by providing a dedicated intergovernmental framework to develop legal and technical solutions. Along with unilateral reforms under the WTO TFA, reforms for modernization of customs procedures by the SAARC sub-group on Customs Cooperation can serve as important building blocks in this regard. South Asian countries can also draw upon various trade capacity-building and assistance programmes provided under the international mechanism. At the Asia-Pacific level, UNESCAP and ADB are spearheading a number of initiatives including projects to reduce trade transaction costs by establishing paperless trade systems.

(c) ***Effective liberalization of regional trade in services***:

As observed earlier, the services sector has emerged as the most dynamic sector for South Asian economic exchanges. Service capabilities are more balanced and appear to complement the needs of SAARC countries more than goods trade, indicating the outstanding potential for mutually beneficial trade in services within the subregion. The service trade is already taking place vigorously and only needs to be further liberalized under a common agenda to maximize the economic and social benefits. For instance, following the liberalization of air services and the visa facility between India and Sri Lanka in 2003, India emerged as the largest market for Sri Lanka for tourism.

Significant trade also takes place in health and education services, contributing to a service sector that has been growing more rapidly than services in almost any other subregion in the world, averaging 14% growth annually from 1995 to 2003. Greater flows of goods and people would expand the economic benefits and boost industries even more, as regulatory barriers such as visa restrictions and poor communication and transport links continue to dampen movement. For example, even if only 0.5%

[15] See (UNESCAP 2015b, 2018b).

more people in South Asia travelled intraregionally, it would increase tourism by 8 million people annually.[16]

The SAARC Agreement on Trade in Services (SATIS) was signed at the 16th SAARC Summit in the Bhutanese capital of Thimphu in 2010 and came into force two years later in November 2012 as a means to deepen regional economic integration through internal services trade liberalization based on a regional study prepared by think tanks (see Kumar et al. 2008). However, the actual liberalization of services trade under the SATIS framework has yet to take place as the member states have been slow to finalize the schedules of specific commitments, with only Bangladesh, Bhutan and India consolidating their final offer lists.[17] Based on the current offers made under SATIS, member states have only committed to a small range of service sectors with numerous limitations.[18] In order to jumpstart service trade liberalization, a regional common schedule for SATIS negotiations in key service sectors of interest to the subregion, such as tourism, transport and logistics, civil aviation, construction, health, education, banking, electric power and telecommunications, is desirable. Mutual recognition of academic and professional degrees would further unlock the flow of human resources to mitigate demand–supply mismatches.

(d) ***Investment promotion to foster regional value chains***:

The real gains from a regional trading arrangement are those arising from industrial restructuring and regional value chains, which also help to boost productive capacities, especially in less developed economies. Many of more recent free trade arrangements combine trade in goods and services with foreign direct investment to rapidly expand production networking (Kumar 1998). In South Asia, a number of countries are now emerging FDI sources, and some intraregional FDI flows are taking place, for example, from India, Pakistan and Sri Lanka to Bangladesh, Nepal among others. Bangladesh has become the fastest-growing destination for intraregional FDI for its textiles and garments sector, partly because of the preferential access it is granted in the world markets as an LDC.[19] India has also become one of the most important sources of FDI to Sri Lanka, following the establishment of the bilateral FTA. Efficiency-seeking industrial restructuring has led to the export of value-added products from Sri Lanka back to India. In this context, the South Asian agreement on the promotion and protection of investments, the draft of which has been under negotiation, needs to be concluded expeditiously to further stimulate sluggish production capacities in LDCs. The SAARC Limited Multilateral Agreement on Avoidance of Double Taxation and Mutual Administrative Assistance in Tax Matters has already been signed. South Asia also needs to address the lack of public access to information about favorable market conditions and investment rules within the subregion that acts as a barrier to intraregional investments.

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[16]India, Ministry of Commerce and Industry, South Asia Economic Conclave (2015) "Boosting trade in the South Asia Region", see http://saec.in/blog/boosting-trade-in-south-asia.html.

[17]See SAARC (2015).

[18]See Pandey (2012).

[19]Evidence suggests that cross-border liberalization of trade and investment has set the stage for the emergence of vertical FDI in the region. See Athukorala (2014).

(e) ***Harmonizing product standards and conformity assessment procedures***:

Although the WTO Agreement on Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to Trade permit national product standards to deviate from international standards when justified by environmental and health considerations, they can act as trade barriers, especially when partner countries lack the capacities to comply with them. Strengthening standards-related capacities, establishing accreditation bodies and regional standards, and developing regional conformity assessment procedures and mutual recognition agreements can help to mitigate any adverse impact that standards may have on trade. The South Asian Regional Standards Organization (SARSO), established in Dhaka in 2011, works towards developing regional standards and has the potential to play an important role in establishing uniform product standards throughout the subregion. Nevertheless, a multilateral arrangement for conformity assessment, or product compliance to technical standards, should be adopted within the SAARC framework as soon as possible to alleviate phytosanitary barriers to trade while protecting populations. The private sector can also help to overcome the challenges posed by NTBs.[20] Strengthening the SAARC Chamber of Commerce and Industry, the apex industry body in South Asia, would allow it to report, mediate and monitor NTBs to alleviate the burden on governments.[21]

(f) ***Cumulative rules of origin and industrial cooperation***:

Besides high trade costs, the lack of provisions to inject greater flexibility into the SAFTA rules of origin restricts the formation of regional value chains. The SAFTA rules allow preferential treatment if at least 50% cumulative value is added with 20% generated in the final exporting country, along with the necessary change of tariff heading (CTH). This provision for regional accumulation may be made more flexible to allow regional value chains to draw upon the synergies between countries in the subregion to create shared products that can truly be termed as "made in South Asia."[22] Another reform could be to provide preferential treatment under SAFTA to trade in intermediate products between the member countries for further processing even if such products are otherwise included in sensitive lists. To facilitate efficiency-seeking industrial restructuring, products of joint venture projects established through intraregional investments could be accorded preferential treatment in their home countries without waiting for the implementation of the SAFTA trade liberalization.

(g) ***Payment arrangements and banking cooperation***:

An inclusive clearing and payments' arrangement between all countries in the subregion would facilitate the expansion of intraregional trade by reducing the need to transfer hard currencies for mutual trade. Though nine countries in the region (Bangladesh, Bhutan, India, the Islamic Republic of Iran, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka) already cooperate under the Tehran-headquartered

[20] See Keane et al. (2014) and See CUTS (2013).

[21] See CUTS (2013). Also see Raihan et al. (2014) for proposals on addressing non-tariff barriers.

[22] See Ratna (2015).

Asian Clearing Union (ACU), the mechanism should consider opening its membership to other ECO and SAARC countries that are not yet members. ACU can also drive financial and monetary cooperation in South Asia, and it should coordinate with the SAARC Finance, a body comprising central banks of the region. A recent UNESCAP study proposes to use advanced technologies to revolutionize the settlement of payments, using real-time gross settlements (RTGS) to save time and costs.[23]

The subregion has very perfunctory cross-border banking links that fail to capitalize on their ability to facilitate trade and investments between countries. The absence of reciprocal banking links makes it difficult for banks to accept letters of credit issued by importers' banks. Countries in South Asia can expedite the liberalization of banking and financial linkages without waiting for negotiations under SATIS to be completed by giving national treatment to designated banks on a reciprocal basis.

6 SAARC and Beyond: South Asia and Broader Regionalism in the Asia-Pacific

As slow down becomes the new normal for advanced economies, the traditional locomotives of the world economy, and as the center of gravity of the world economy shifts eastward, regionalism within and between subregions becomes a critical strategy for sustaining Asia-Pacific region's dynamism. For subregional groupings, it is important to adopt a long-term vision and take incremental steps to achieve goals. ASEAN, for instance, has successfully moved towards the goal of ASEAN Economic Community achieved by 2015 and advanced from its initial 2020 target. In SAARC's case, an Eminent Persons Group proposed back in 1999 a long-term vision of a South Asian Economic Union to be achieved by 2020. The SAARC process is currently stalled and has not been able to hold a Summit since 2014 which itself was held after a gap of 3 years. The SAARC process has moved very slowly throughout its life in a very halting manner. It is natural therefore to question whether it is the right framework for advancing regional cooperation in Southern Asia. It would appear therefore that alternate engines of regional cooperation are needed to harness the potential. BIMSTEC is one such framework, and Bangladesh-Bhutan-India-Nepal (BBIN) has emerged as another one in recent times with the signing of the Motor Vehicles Agreement after it failed to get signed at the 2014 SAARC Summit.

A greater opportunity for South Asia may lie in its integration more broadly into Asia-Pacific and contribute to an incipient broader regionalism in the continent. As a part of its "Look East Policy" adopted in the 1990s, India has gradually deepened its partnership with ASEAN through the ASEAN + 1 FTA; membership in the East Asia Summit; and participation in the Regional Comprehensive Economic Partnership of East Asia (RCEP) negotiations; and Comprehensive Partnership Agreements

[23] See Goyal (2014).

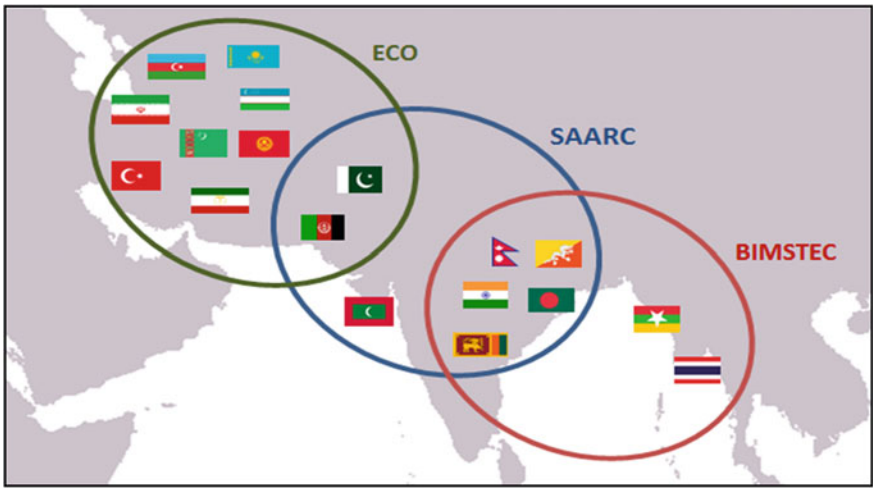

Fig. 1 Potential arc of advantage in Southern Asia. *Source* UNESCAP

with Japan and South Korea. The India-Myanmar-Thailand (IMT) highway and initiatives under Mekong–Ganga Cooperation (MGC) and BIMSTEC are further signs of expanding linkages. Similarly, Pakistan has also been a sectoral dialog partner of ASEAN and has signed FTAs with China and Malaysia. In 2015, the $46-billion China–Pakistan Economic Corridor was launched. A series of electricity and energy pipeline projects between Central and Southwest Asian countries with South Asian countries including Afghanistan, Pakistan and India (CASA1000, TAPI and IPI) provide evidence of growing energy trade and interdependence.

These developments demonstrate the immense possibilities for building greater synergies in the broader Eurasian economic space. Firstly, three overlapping groupings of SAARC, ECO and BIMSTEC could create an institutional arrangement to facilitate cross-fertilization and learning, linking programmes to exploit synergies and network externalities that could become an *arc of advantage* (Fig. 1). A broader and more open platform for regional cooperation may also help to diffuse the political sensitivities that have often held up progress towards South Asian economic integration. The lifting of sanctions on the Islamic Republic of Iran and democratic transition in Myanmar are also positive developments that can facilitate this shift.

SAARC, ECO and BIMSTEC should also take note of the broader trends in regionalism in the Asia-Pacific. The RCEP, currently under negotiations, brings together 10 ASEAN countries and their six FTA partners, creating one of the world's largest trading areas covering about 30% of world trade. The RCEP has an open accession clause to enable any country to participate in the future. While the open accession clause provides an opportunity for South and Central Asian countries to join RCEP in future, their own deeper integration within SAARC and BIMSTEC frameworks, respectively, will improve their chances of being able to join. For South Asia, this would mean implementation of the SACEP framework proposed above,

in other words simultaneous and coordinated action on various priority areas of regional economic cooperation covering trade, investment, connectivity, development finance, etc., through instruments provided by or being developed under the SAARC framework. Other South Asian countries—including Bangladesh, Pakistan and Sri Lanka—could seek accession to RCEP in future by leveraging their engagement with India, a founding member. Broadening RCEP to include South Asia will unleash the enormous potential of regional value chains in the greater Southern Asian region. Extended transport connectivity corridors linking Southeast Asia with Southwest and Central Asian countries passing through South Asia, as discussed earlier, will also facilitate regional production networking.

As the universal regional apex body in Asia and the Pacific with convening power, with its multisectoral agenda of work and strategic presence at the subregional levels, UNESCAP is uniquely placed to not only promote the ideal of deeper cooperation in South Asia and other subregional groupings but also provide them a forum to come together for fostering broader regional integration in the Asia-Pacific such as creating an arc of advantage linking ECO-SAARC-BIMSTEC. Several of strategically located and important constituent nations of Asia-Pacific are now in a better position to participate and play an important role in the process of Asia-Pacific economic integration. The knowledge pool of UNESCAP and its various regional institutions and cooperative mechanisms including the Asian Highways, Trans-Asian Railways, Dry Ports Agreements and Asia-Pacific Information Superhighway (AP-IS) would be of immense value for promoting regional integration and cooperation towards the greater goal of uniting Asia-Pacific for sustainable development.

7 Concluding Remarks

Trade and regional economic integration are critical for meeting the SDGs as vital source of solutions to development challenges. This is especially because of the pervasive role of cross-border trade and investments in achieving the goals of inclusive and sustainable economic growth and employment for all. While economic cooperation and integration at the subregional level have worked as a powerful tool in empowering neighborhoods of states in many parts of Asia-Pacific, particularly in East and Southeast Asia, the South Asia subregion has lagged behind in harnessing its full potential and still remains as an underperformer in terms of poverty reduction and other indicators of development.

South Asia's trade enjoyed high growth rates prior to the global economic crisis of 2008, and the fall in growth rates of the subregion in the post-crisis period was less in comparison with that of other developing subregions of the world. South Asia experienced steadily improving trade-to-GDP ratios over the past two decades and has exhibited product and market diversification to some extent during this period. However, in the recent years, South Asia's trade growth has slowed down due to external market volatilities. It is of great concern that signs of an onset of another slump in trade are appearing at a time when South Asia should be accelerating its

trade reforms to reach much greater levels of trade integration, especially given that intraregional trade potential of the subregion remains largely unexploited.

UNESCAP estimated that the intraregional export potential in South Asia was $81.2 billion in 2014 against actual exports of only $26.8 billion, indicating that nearly 67% of the potential remained untapped. Bilateral trade between India and Pakistan could be as high as 12 times the current level, while substantial intraregional export gains are found for all countries, provided that comprehensive trade reforms are made. Intraregional trade could grow to nearly $172 billion by 2020. Low levels of intraregional trade have been due to, among other things, the high proportion of unreported, informal and third country trade, poor supply capabilities in LDCs and high costs of doing trade in the subregion that denies benefits of geographic proximity and contiguity to intraregional trade.

To harness the potential of regional economic integration and formation of value chains in South Asia, UNESCAP has proposed to consolidate and build on the different initiatives into a unifying framework, namely the South Asia Comprehensive Economic Partnership (SACEP). SACEP could pull together the various aspects of liberalization, trade facilitation and cooperation under seven key priorities that are more fruitful than sum of their parts. These priorities are: (a) advancing the liberalization of trade in goods, (b) strengthening transport connectivity and trade facilitation, (c) effective liberalization of regional trade in services, (d) investment promotion to foster regional value chains, (e) harmonizing product standards and conformity assessment procedures, (f) cumulative rules of origin and industrial cooperation and (g) payment arrangements and banking cooperation. Most of the essential elements required for bringing about reforms for achieving these policy priorities have been initiated in one form or the other. The idea is to build on them and consolidate them for effective implementation to deepen integration.

In particular, by developing extended transport (and energy) corridors across the subregion and by linking the Islamic Republic of Iran and Myanmar, countries in South Asia can harness the fruits of their strategic geographic location to emerge as the hub of trade and economic exchanges between Southeast Asia and East Asia on the one hand and Central Asia and Europe on the other.

South Asia, while deepening its subregional economic integration, also needs to be conversant of incipient broader regionalism in Asia and the Pacific, especially through RCEP, which is creating a large economic space by bringing together ASEAN countries and their six dialog partners, in a single regional arrangement. From South Asia, India as a member of the East Asia Summit has been a party to the RCEP negotiations. Although it has not signed RCEP agreement at the ASEAN Summit in November 2019, it has a year to join. Other subregional countries can seek entry into RCEP in due course by using the open accession clause in the agreement. However, SAARC and BIMSTEC will have a better chance to play an important role in the broader regionalism through their own deeper integration. Greater collaboration between these regional organizations can open up creation of a connected economic space in Southern and Central Asia, leading eventually to broader Asia-Pacific integration. Such an open platform for regional cooperation may also help in diffusing the political sensitivities that have often held up progress towards South

Asian economic integration. With its convening authority, its multisectoral agenda of work, various regional institutions and cooperative mechanisms it promotes and with its strategic presence at the subregional level, UNESCAP can act as an important catalyst for regional economic cooperation in South Asia and beyond for the greater goal of uniting Asia-Pacific for sustainable development.

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Chapter 5
Political Economy of Policymaking: South Asia in Perspective

Dushni Weerakoon

1 Introduction

The South Asian regional economic integration process has garnered only limited global attention despite decades of efforts at national and regional levels to dismantle trade and investment barriers within the region. Indeed, South Asia continues to remain one of the least integrated regions in the world. Not surprisingly, it also remains a region where countries continue to maintain relatively high barriers to trade and investment at the national level, viz. their counterparts in Southeast and East Asia by most comparative indicators. South Asia is thus often viewed as a region that has individually and collectively been slow to proceed with greater openness and liberalisation despite embarking on a major economic reform process in the early 1990s.

Since the initial burst of reforms, South Asia has struggled to move forward with more politically difficult 'second-generation' reforms that go beyond macroeconomic and trade reforms to regulatory and institutional governance aspects. These are required to modernise and integrate the region with a fast-changing global economic landscape; indeed, they are necessary even more than before as countries around the world struggle to sustain growth in the midst of a prolonged and hesitant recovery following the global financial crisis of 2007/08.

Thus, understanding why the pace and direction of domestic reforms in South Asia have lagged significantly behind its Asian competitors is important in understanding the dynamics of efforts towards reforms at the regional level as well. Much of the explanation lies with the intersection of economics and politics, i.e., to understand how political actors, institutions and economic processes influence each other. These interlinkages are particularly complex in South Asia, combining as it does countries

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with a relatively strong tradition of democratic institutions and other more nascent democratic states that, in the past, have undergone phases of military rule.

This paper offers an analytical survey of the current policy setting and contemporary policymaking process across South Asian economies. It argues that a weak governance environment is a critical barrier to instituting reforms, leading to the continuance of bloated state structures and resistance to reforms, with reform policies substantively influenced by interest-group dynamics, populist ideologies and rent-seeking opportunities.

2 Drivers of Policy Change

Much has been written about the political economy of regional integration in South Asia (Kher 2012; Desai 2010; Weerakoon 2010). The skewed balance of power within the region, intra-state conflicts, lack of leadership and weak institutional structures at the regional level among many others have been identified as constraints holding back closer integration. There has been much less written on the political economy challenges to bringing about sustained economic reforms at the national level.[1] The latter, however, also has a bearing on South Asia's readiness to commit to reforms at the regional level, using domestic reforms as a platform or 'building block' for regional liberalisation efforts. Indeed, South Asia's first steps towards the formation of a trade block began in 1991 with the start of a major reform initiative across the region in the early 1990s propelled by the liberalisation of the Indian economy.[2]

Thus, South Asia presents an interesting study of a region that has pursued economic reforms yet continues to experience significant drawbacks to the continuance of the reform process and its effectiveness (Dee 2012; Rana and Chia 2015). This situation raises important questions about why reforms sometimes slow down, stop or reverse, despite sound policy content; which political, economic and social forces drive or block policy change; which opportunities and incentives, and which constraints and disincentives, are faced by reformers; and why political will for reforms is sometimes strong and at other times weak. Clearly, a range of factors—institutions, historical and cultural settings, and the stage of development—matter in explaining why, when and how policy changes occur. To that extent, South Asia's approach and experience differ significantly from comparative experiences such as that of Southeast Asia (Hill 2013). In particular, institutions, historical and cultural settings and stage of development differed between the two regions.

In seeking to explain these differences, the diagnostic element to policymaking distinguishes between reform context, arena and process (World Bank 2008). The reform context refers to a country's socio-economic, political, cultural and historical

[1] See Dee (2012) for a discussion of economic reform processes in South Asia.

[2] The South Asian Association for Regional Cooperation (SAARC) set-up in 1985 established an Inter-Governmental Group on Trade Liberalisation in 1991. Its proposal that SAARC adopt a preferential trade arrangement was accepted in 1993.

characteristics that determine the political processes within a sector, and the potential links to national political institutions and stakeholders. The reform arena refers to the institutions that govern relations and behaviour within a sector. Here, the analysis relates to the economic and political interests of the stakeholders that are both driven by and affected by the proposed policy reforms. The reform process refers to factors such as information flows, public debate and coalition building, which bring about change in the policy arena.

The intersection of reform context, arena and process raises an important question about why governments would choose to select and maintain certain policies, even if they are deemed to be demonstrably inefficient for sustained growth and development. It also raises the related question of why some governments choose to change direction and bring about transformative reforms. Equally important are questions about why some countries manage to sustain policy changes while others are sometimes forced to abandon them, and what role institutions play in shaping opportunities for reform and the outcomes of those opportunities.

Much has been published on the determinants of policy and institutional change, and the political economy of policy reform. The most common variables that explain initiation of policy reforms in relation to developing countries include the presence of domestic economic difficulties, pressure from international lending agencies, a desire to break away from groups with vested interests in the prevailing economic system, strong political leadership and support from a broad constituency that favours change. Often, many of these factors converge. For instance, an economic crisis can provide a window of opportunity for reform, allowing governments to overcome rent-seeking interest groups who have a stake in maintaining past systems of state patronage. In some cases, domestic economic difficulties have preceded a change of political leadership, and this situation facilitates the shift of powerful vested interests that have developed around certain policies. Economic difficulties can also build broad support among the public for change, while international lending agencies may step in with 'conditional' soft loans and grants that can ease fiscal constraints, allowing governments to offer 'sweeteners' to make reforms more palatable.

However, an economic crisis is neither a necessary nor a sufficient condition to drive a successful reform process. A newly elected and popular government with a strong mandate can just as easily initiate reforms during its early 'honeymoon' period in office. Indeed, strong political leadership can be a key determinant in driving a reform process through, even in the absence of significant political control. Here, support from competent technocrats in the public sector will be a key determinant, particularly in sustaining a process of reforms. Thus, interdependent factors such as power relations within sectors, vested interests and links to national political processes have a strong bearing on whether reform processes are sustainable and deliver broad-based socio-economic benefits.

Given the complex intersection between politics and economics, it is not surprising that, although some countries are praised for effective reform measures, different stakeholders may have widely differing views on how successful these efforts are. Reforms can generate distributional impacts that create 'losers' and 'winners', entailing short-term adjustment costs as well as the potential for long-term benefits. Thus,

there is a growing recognition of the risks to the political economy which are associated with reforms. A vital element of this is the political economy dynamics of policy change; that is, how reforms get tabled and why; how they are perceived; and who will support, oppose or attempt to change the proposed policy initiatives.

3 Policy Reform in South Asia

For the most part across South Asia,[3] reform efforts have been associated with ruling political regime changes and economic crises. Indeed, economic crises have had a role in preparing the stage for political change and subsequent economic reforms. Sri Lanka was the first South Asian economy to undergo this as it made a decisive shift to an open, liberal economy in 1977. A weak economy and a change of government with an overwhelming parliamentary majority ensured a relatively successful economic transition.[4] Although the rest of South Asia was slow to match the same depth of reforms, incremental changes in the same direction began to take shape in Bangladesh and Pakistan in the late 1970s and in India in the early 1980s. Early reforms in Bangladesh, which began in the late 1970s, were preceded by violent political change and the assumption of military rule in 1975. Bangladesh undertook a number of liberalising policy reforms along standard structural adjustment lines in the early 1980s, against the backdrop of serious macro-economic imbalances. A more comprehensive programme of economic reforms was launched in the early 1990s, accompanied by the transition to an elected, democratic government.

India began to implement some reforms in the early 1980s, but the scale of the reforms implemented in 1991 was far more ground breaking. Initiated by a newly elected minority coalition government, those later reforms came about under pressure from a growing balance of payments (BOP) crisis. Like its neighbour, Pakistan also began a process of reforms in the early 1980s, progressing much more quickly than India, but concerted reforms began only towards the latter years of the decade under a weakening external payments situation. Again, the policy thrust came as a new government gained power.

International financial institutions such as the International Monetary Fund (IMF) and World Bank have been actively involved in all the major periods of reform in South Asia. Sri Lanka's reform efforts in 1977 were backed by financial support from the IMF, Bangladesh's early reforms in the 1980s were undertaken against rigid conditionalities of the IMF and World Bank, India was forced to approach the IMF in 1991, and Pakistan's 1988 reform efforts were underwritten by the IMF. Nevertheless, it would be wrong to argue that aid conditionality played a key leveraging role in the reform initiatives. In Sri Lanka, for instance, in spite of financial support from the

[3] In discussing South Asia, the rest of the paper relates primarily to Bangladesh, India, Pakistan and Sri Lanka.

[4] Sri Lanka's 'second wave of reforms in 1989–90 also followed a change of leadership amid a weak economic environment.

IMF and World Bank, the reform process was essentially domestically driven (Moore 1985). Although conditionalities were important in driving reforms in Bangladesh, Mahmud et al. (2008) posits that the political incentives in relation to their economic rationale dictated the reform process more strongly than aid conditionality.

Political economy factors were important in the reform process. It required governments to be sensitive to the need to mobilise and build support for their economic programmes. For instance, Bangladesh structured its tariff reforms to protect end-users, while other compensatory measures were introduced such as a higher percentage of public spending on social sectors such as health and education (Mahmud et al. 2008). Similarly, Sri Lanka's reform initiatives were accompanied by public investment programme aimed at providing large-scale employment opportunities and the introduction of national poverty alleviation programmes (Weerakoon 2012).

In the case of the India's 'gradualist' reform strategy, it is argued to have been looser in some areas, setting only a broad direction with the precise end goal and pace of change left unstated to minimise opposition, or even to allow a policy reversal should it prove necessary (Ahulwalia 2002). By contrast, successive governments in Pakistan are argued to have been much more vocal and explicit in stating their policy preferences to further a liberal economic agenda (Kumar and Hussain 2010). It has been argued, for example, that a more rapid pace of privatisation was possible in Pakistan owing to the absence of strong organised trade unions allied to political parties compared to other South Asian countries such as India and Sri Lanka (Candland 2002).

While South Asia's reform efforts have been limited and partial in nature, they were extensive in comparison with the previous policy regimes. The region has also not witnessed any significant reversal of the reforms that have been undertaken. Indeed, competing major parties in almost all South Asian economies have come to accept the shift to market-oriented economic policies.[5] An explanation may lie in that there is little incentive for successor governments to reverse broad-based reforms once adjustment costs have been absorbed and economic benefits have begun to accrue, whereas South Asia has failed in moving on to the more politically challenging second-generation reforms that deal with institutional and regulatory changes. Paradoxically, therefore, even as the region achieved economic policy convergence between mainstream parties, it experienced growing policy paralysis. Much of it relates to governance and institutional weaknesses across the region.

[5]This was not always the case. For example, Sri Lanka's two main political parties, the Sri Lanka Freedom Party (SLFP) and the United National Party (UNP) draw support primarily from the rural voter base, and urban and business sectors, respectively. In Bangladesh, the Awami League (AL) and the Bangladesh National Party (BNP) have similar voter preferences, as does India's Congress party and the Bharatiya Janata Party (BJP).

4 South Asia's Policy Paralysis: Institutional and Governance Gaps

There are clearly some differences in the evolution of institutional and governance structures across South Asia. The most significant of these is that countries such as India and Sri Lanka have more established and functioning democracies than either Pakistan or Bangladesh, where military intervention has prevailed from time to time. However, South Asia's many shared cultural and historical antecedents far outweigh such differences. These include inheriting entrenched political and administrative structures from a common colonial past under the British (Hossain et al. 1999).

Democratic politics as practised for the most part in South Asia leads to regular changes of elected governments. It is often argued that functioning democracies find it much harder to initiate and sustain reforms. It can require coalition building and stakeholder buy-in even where one party tends to dominate politics, as India's Congress party has done in post-independence India. Besides the intraparty rivalry that can result from a democratic polity, competition for votes also means that the attention of politicians can be more focused on procuring projects for their respective constituencies (with an eye on the next election) than on lawmaking and development of national policies.

There is no doubt a grain of truth in the assumption that democratic forms of government are messy, but investigations of the relationship between political liberties and economic development have shown mixed results (Helliwell 1994). The focus of attention has been on high-achieving East Asian and Southeast Asian economies, where governments are deemed to have successfully implemented deep economic reforms for self-sustained growth under relatively authoritarian regimes, or where politics have been dominated by a single party. However, there is no systematic evidence to suggest that authoritarian regimes will necessarily result in high economic growth when extended to countries in Africa and Latin America.

Also, some countries that have implemented successful reforms have done so under regimes which are not authoritarian. In Bangladesh, for instance, the introduction of wide-ranging economic reforms in the early 1990s coincided with the transition to democracy in the country. Indeed, Rodrik (1997) argues that democratic forms of governance have intrinsic value independent of their economic consequences and can yield long-run growth rates that are more predictable and produce greater stability in economic performance. Democratic forms of governance also impose their own compulsion on governments to meet public expectations and gain legitimacy. This can be particularly important in a region such as South Asia, where there is a vibrant, politically savvy polity.

A more compelling constraint has been the slow progress in building and strengthening institutions of political and economic governance. South Asia routinely performs poorly according to most global indicators of political and economic governance (Transparency International 2014). Issues such as poor law and order, corruption, weaknesses in the judicial system and deteriorating quality of public administration are major hindrances to effective policy formulation and implementation in

the region. With institutional weaknesses that fail to provide effective oversight and accountability, South Asia relies on the electoral system to vote out governments deemed to have crossed an 'invisible' threshold of poor governance and corruption.

The concentration of state power in highly centralised regimes in South Asia—with ample opportunities for rent seeking—has been a significant contributory factor to corruption. In many South Asian countries, political parties tend to be dominated by a handful of ruling-class elites. The concentration of power, and the centralised nature of decision-making that often accompanies it, stifles more democratic practices within parties. Nepotism is rife within most such 'democratic' political parties and is often viewed as the preserve of a single family.

While economic liberalisation removed opportunities for rent seeking by dismantling licensing arrangements and so on, the continuance of patronage politics has allowed other forms of corrupt practice to persist unabated. South Asia's burden of excessive bureaucracy—a legacy of the colonial administrative structures—continues to be one such obstacle to effective policymaking and implementation. Although theoretically apolitical, the bureaucracy has become increasingly politicised over time and remains firmly entrenched as powerful groups, performing both administrative and political functions. It is argued that this has led not only to a significant lack of transparency in policy decisions—and large discretionary powers in policymaking—but also to a lack of accountability among policymakers and elected politicians, and distancing from their constituencies (Mahbubul Haq Human Development Centre 1999).

These stress lines are also evident in the practice of increasingly confrontational politics in South Asia. As previously noted, despite the fact that the mainstream political parties have embraced a similar economic platform, the party system continues to affect the constraints and benefits of politicians for undertaking reforms. Political parties are likely to oppose anything in opposition, merely in the hope of returning to power, stymieing efforts to build broad support for reform efforts. Political rivalry after the initiation of major reforms in Pakistan in the late 1980s was a significant contributory factor in poor implementation of policies, despite the fact that both governing parties were committed to similar economic strategies. Similarly, in Bangladesh, party rivalry has been a significant constraint in ensuring the continuation of a reform programme that is undisturbed by political instability.

The rise of loose coalition arrangements has exacerbated the problem. Politics across much of South Asia tends to be fairly fluid, with alliances and political affiliations—represented by interdependencies between different interests across caste, religious, ethnic and regional divisions—often shifting in response to popular sentiment. Coalition governments around one or the other of the major political parties have become the norm for most countries since the latter half of the 1990s. Moreover, many of the countries also have decentralised forms of government, invoking a centre–state division in politics.

In theory, the diversity that comes with coalition arrangements and decentralised forms of government can inspire stability, to hold the political system together. Policymaking autonomy at local level can also ensure the enactment of more efficient policies. For instance, it can create competition among subnational units to provide

the most efficient policies, where the least efficient would follow the example of the better performing. However, policymaking and attempts at reform can be slowed down by coalition arrangements and the opening up of political channels that represent the interests of subnational governments, and thus increase the number of political players and layers. Such developments have imposed a near straitjacket on reform efforts in many South Asian countries, with constant shifts in coalitions and interests leading to instability and unpredictable policy environments. In countries with less centralised structures, such as India, the problems are exacerbated when power in the centre and state resides with different political parties. Indeed, India has witnessed a growth of regional parties, and their assumption of power at state level has made the management of coalitions more challenging in recent years.

The situation is exacerbated by the continuing presence of political parties that have thrived in the socialist milieu of South Asian democratic space. 'Left-leaning' parties tend to be vocal and well organised, often resisting liberalising reforms on the basis that the benefits will be enjoyed only by the powerful elites and the better off, particularly the corporate sector. The problems are exacerbated by the fact that such political parties also tend to have broad trade-union support that opposes reforms, even if their actual numbers in government are limited. Indeed, as previously pointed out, a much faster pace of privatisation in Pakistan relative to its neighbours is largely explained by the absence of unions allied to political party patrons (Candland 2002).

As a result of the two-party system, and latterly of coalition governments, South Asia's economic policies tend also to be heavily influenced by populism, evidenced by the weak fiscal situations across most countries in the region. Coalition arrangements not only encourage governments to take a short-term view on policy but, critically, also lead the incumbent and contesting opposition to engage in competitive populism, essentially pandering to 'vote-bank' politics. Populism is derived from the voting strength of the less well off, who tend not to be well organised but can exert significant influence on electoral outcomes. For instance, most of South Asia's population is still rural based, dependent on agriculture for employment and livelihoods, and relatively poor. Political parties tend to secure short-term gains by promising to implement populist policies such as subsidies, whether on fertiliser (as used in Sri Lanka) or a promise of 100 days of work for all agricultural labourers (as used in India in 2005). For most South Asian governments of today, the constant reminder of electoral imperatives means that populist influence never really abates from the policymaking process.

5 Conclusion

South Asian countries share a common goal; that is, to build on past reforms to sustain and accelerate growth as a means of raising employment and alleviating poverty across the region. Closer economic integration with neighbours through both bilateral and regional initiatives has also been launched as a complementary process in pursuit of these broad socio-economic goals. The early reform initiatives

in the macro-economic arena, trade and investment were complementary to regional integration initiatives through bilateral and regional free trade agreements.

However, despite the concerted reform effort in the early 1990s that delivered significant benefits in terms of higher growth and major inroads into tackling poverty, the region as a whole has failed to build on the initial reform agenda and tackle 'second-generation' structural reforms that impinge on regulatory and institutional processes across countries. These reforms at the domestic level are also important in building a consensus around the need for such reforms at the regional level to go beyond trade in goods and into services and investment. South Asia is lagging behind in moving both the domestic reform and regional integration agendas forward.

A key stumbling block has been institutional and governance weaknesses that can become a binding constraint on achieving these goals in the long term, particularly in the case of the more complex reforms that remain on the agenda for most countries of South Asia. In the absence of strong institutions and governance structures, the current policymaking process in South Asia can be viewed as the outcome of incentives created by patronage politics. Oversized bureaucracies with strong vested interests are a source of resistance to reform in most South Asian countries. Hence, it is not surprising that South Asia's major reform efforts have occurred in the midst of economic difficulties, or when political leadership has changed thanks to outsiders unconnected to the old regime. However, even when such reforms have occurred, there has been limited institutionalisation of a reform process. Decision-making in South Asia remains highly centralised with major political parties themselves the preserve of a handful of elites, limited to a 'hand-picked' inner team of politicians and bureaucrats. The party system that exists in South Asia, where competing parties have a balanced chance of taking power, also affects the constraints and benefits of politicians for taking the path of reforms.

Like in many other parts of the world, there are limited channels through which the public or interest groups can influence policymaking in South Asia. The organisational capacity of interest groups representing support for a particular reform tends to be weak. In most economic sectors, the potential losers from reforms can more easily identify themselves than those likely to benefit from the reforms. Although many may benefit, there is less likelihood of an organised platform emerging in support of reform as opposed those who may organise on an anti-reform platform. Moreover, when avenues to voice objections to or seek modifications of economic reforms during the planning stage are narrow, individuals or groups are more likely to assert their 'rights' during the implementation stage, at times resisting the reforms. Overall, the end result of such trends in most South Asian countries, and particularly in those with close associations between political parties and trade unions, is to witness a more gradualist and slow approach to reforms. Under such circumstances, the anticipated benefits may fail to materialise if reforms get stuck at a partial state.

South Asia needs strong political will and leadership to address institutional weaknesses in order to establish an enduring reform process both at the domestic and regional levels. Although political leadership and structures are often a part of the problem, they are also necessarily a part of the solution to creating capabilities and capacities to implement public policies. If South Asian countries are to overcome

what appears to be a common impasse on making policy reforms a politically feasible option, politico-institutional structures across countries need to be reinvigorated to institute norms and rules that can sustain a reform process. Only by doing so, can countries improve the equity, efficiency and effectiveness in the delivery of broad-based socio-economic benefits to the people of South Asia.

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Chapter 6
India in Global Production Network Trade: Patterns and Policy Implications

Kunal Sen

1 Introduction

Perhaps the most distinctive feature of international trade in recent years is the rise of multistage global production networks in which firms fragment manufacturing production across borders by locating individual production stages in the countries where they can be performed at least cost (Jones 2000; Helpman 2011). Thus, "firms seem to be subcontracting an ever expanding set of activities from production design to assembly, from research and development to marketing, distribution and after-sales service" (Grossman and Helpman 2005, p. 135). The rising importance of global production networks (GPN) in world trade has also meant that patterns of trade have shifted quite dramatically in the past two decades, especially from low- and middle-income countries. The most remarkable feature of GPN trade has been the increasing importance of East and South-east Asia in this type of trade, the share of East Asia in total network exports increased from 51.8% in 1992–1993 to 60.7% in 2007–2008. Much of this increase occurred in developing East Asia, and the major driving force was China, where the share of total network products in total manufacturing trade increased sharply from 21.1% in 1992–1993 to 52.1% in 2006–2007.

Among South Asian countries, India has undergone significant economic liberalisation since the early 1990s and a greater engagement with the world economy, along with rapid economic growth (Sen 2008). In this chapter, we assess how much India has been able to engage in GPN trade with East Asia. We also discuss the possible policy constraints in India's greater engagement with East Asia in GPN trade.

In Sect. 2, we first look at India's performance in GPN trade within the South Asian region. In Sect. 3, we next examine India's exports to key East Asian and South-East Asian countries that are engaged in global production network trade and take stock of what India has achieved to date. In Sect. 4, we identify the key factors that constrain

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the engagement of India with East and South-East Asia in global production network trade. Finally, we end with some conclusions in Sect. 5.

2 Patterns of Engagement in GPN Trade in South Asia

We examine the performance of selected South Asian countries, including India, in GPN trade in Table 1 over the period 1990–2011. We see that the share of parts and components in total network trade for Bangladesh and Pakistan is almost insignificant at less than 2%, while for India and Sri Lanka, it is greater than 5%. There is some increase in the share of parts and components in total network trade for these two countries over the 1990s and 2000s. With respect to the share of GPN products in total manufacturing exports, we find that among the four South Asian countries, Bangladesh has the lowest share at 1.7% in 2006–2011, and India has the largest share at 14.3% in the same period. In the case of India, we see a fairly large increase in the share of network products in total manufacturing exports, which doubled over the period 1990–2011. Overall, we find that among the four South Asian countries,

Table 1 Parts and component trade in total network exports and share of network exports in total manufacturing exports, selected South Asian countries

Countries	1990–1995	1996–2000	2000–2005	2006–2011
Parts and components as percentage of total network exports				
Bangladesh	0.7	0.8	0.8	n.a.
India	6.8	7.6	8.8	10.9
Sri Lanka	3.0	5.6	6.5	5.3
Pakistan	1.0	1.1	1.3	1.7
Share of network products in total manufacturing exports (%)				
Bangladesh	0.4	0.7	1.1	1.7
India	6.8	7.0	8.5	14.3
Sri Lanka	3.3	5.7	6.8	7.2
Pakistan	2.3	2.2	2.8	3.5

Note Network products are

Source compiled by the author from UN Comrade database using the commodity classification from Athukorala (2014)

[a]Office machines and automatic data processing machines

[b]Telecommunication and sound recording equipment

[c]Electrical machinery excluding semiconductors (776)

[d]Semiconductors

[e]Road vehicles

[f]Other transport equipment

[g]Professional and scientific equipment

[h]Photographic apparatus and optical goods, watches and clocks

India has engaged the most in GPN trade, followed by Sri Lanka, then Pakistan, with Bangladesh's engagement being the least.

Therefore, the only South Asian country which has engaged in network trade in some measure is India. This is not surprising, as India has a diversified manufacturing base, with considerable expertise in human capital and technology-intensive goods that comprise the bulk of GPN trade, as compared to the other South Asian countries whose comparative advantage mostly lie in labour-intensive products such as wearing apparel. In this section, we look more closely at India's performance in network trade, especially in relation to East and South-East Asia. We first look at India's exports in GPN products to the rest of the world over the period 1990–2011, disaggregating these exports into the key commodity categories that comprise GPN trade (Table 2). We find that in some commodities, parts and components comprise most of India's exports in these commodity groups—these are office machines and data processing machines, electrical machinery and semiconductors. In contrast, in professional equipment and photographic goods, final assembly comprises most of India's exports. On the whole, parts and component are becoming increasingly important in India's GPN trade, across most GPN commodity groups. However, network products still remain relatively unimportant in India's total manufacturing exports, though their share in India's total manufacturing exports is increasing over time. The most important GPN commodity in India's export basket is road vehicles, followed by other transport equipment, followed by electrical machinery.

3 Patterns of India's GPN Trade with East Asia

We now analyse India's export performance in GPN products for seven selected East and South-east Asian countries which are part of the global production networks in the Asian region and have significant trade in network products—these are China, Korea, Japan, Malaysia, Singapore, Thailand and Vietnam. We compile India's exports in parts and components and in final assembly in the six major SITC 2 digit commodity groups which form the bulk of network trade—these are SITC 75 (Office machines and data processing machines), SITC 76 (Telecommunications equipment), SITC 77 (Electrical goods), SITC 78 (Road vehicles), SITC 87 (Professional and scientific equipment) and SITC 88 (Photographic apparatus). To disentangle parts and component from final assembly trade, we first compute total parts and component trade in each of the SITC 2 digit commodity groups by adding all exports by India to the country in question in parts and components in that commodity group using the detailed SITC 5 digit list of parts and components provided in Athukorala (2010) and reproduced in Appendix 1 of our paper. We can then obtain final assembly exports by India to each of the seven countries in our sample by subtracting total parts and components trade in each SITC 2 digit category from total exports in that category (see Athukorala 2010 for further justification of this approach). We start our analysis in 1990 (the year prior to India's major economic reforms) and end our analysis in 2012.

Table 2 India, network trade by commodity group and total manufacturing exports to the world

	1990–1995	1996–2000	2000–2005	2006–2011
Parts and components as percentage of total exports in each commodity group				
Office machines and automatic data processing machines	77.7	88.6	89.7	87.3
Telecommunication and sound recording equipment	31.7	35.7	39.2	45.2
Electrical machinery excluding semiconductors (776)	90.8	84.2	77.4	78.5
Semiconductors	100.0	100.1	100.0	100.0
Road vehicles	51.6	56.9	50.6	34.6
Other transport equipment	46.0	33.8	29.6	25.0
Professional and scientific equipment	10.8	14.8	18.8	25.3
Photographic apparatus and optical goods, watches and clocks	12.4	9.3	13.1	15.3
Total exports in each commodity group as percentage of total manufacturing exports				
Office machines and automatic data processing machines	0.7	0.7	0.8	0.5
Telecommunication and sound recording equipment	0.3	0.4	0.4	1.6
Electrical machinery excluding semiconductors (776)	1.4	1.8	2.4	3.1
Semiconductors	0.3	0.3	0.3	0.4
Road vehicles	3.4	2.8	3.2	4.7
Other transport equipment	0.2	0.3	0.6	3.2
Professional and scientific equipment	0.3	0.3	0.4	0.6
Photographic apparatus and optical goods, watches and clocks	0.2	0.3	0.3	0.2
Total	6.8	7.0	8.5	14.3

Source compiled by the author from UN Comtrade database using the commodity classification from Athukorala (2014)

We begin the partner country-level analysis of India's GPN exports by looking at India's GPN exports to China (Table 3). By and large, India's GPN exports to China have been dominated by the final assembly, except in the case of office machines and road vehicles, where parts and components dominate in total network exports. Disappointingly, the share of network products in India's exports to China remains at a very low level, though there has been a slight increase from 2.1 to 3.4% from 1990 to 2012. This has been the case in spite of a remarkable increase in India's total exports to China from 18 million US dollars in 1990 to 14,729 US million dollars in 2012.

We now look at India's network exports to Japan in 1990–2012 (Table 4). India's exports to Japan in network products have been mostly in final assembly in office

Table 3 India's parts and component and final assembly exports to China, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	0.0	6.9	48.1	37.0	80.3
SITC 75 Final assembly exports	100.0	93.1	51.9	63.0	19.7
SITC 76 P&C exports	0.0	22.6	81.6	54.8	13.2
SITC 76 Final assembly exports	0.0	77.4	18.4	45.2	86.8
SITC 77 P&C exports	100.0	95.5	68.7	59.9	56.2
SITC 77 Final assembly exports	0.0	4.5	31.3	40.1	43.8
SITC 78 P&C exports	100.0	85.2	97.5	91.5	72.5
SITC 78 Final assembly exports	0.0	14.8	2.5	8.5	27.5
SITC 87 P&C exports		0.0	16.5	12.5	27.8
SITC 87 Final assembly exports		100.0	83.5	87.5	72.2
SITC 88 P&C Exports	72.4	86.0	9.0	0.8	0.6
SITC 88 Final assembly exports	27.6	14.0	91.0	99.2	99.4
As share of India's total exports to china (%)					
SITC 75 Total exports	0.15	0.08	0.21	0.14	0.41
SITC 76 Total exports	0.00	0.00	0.43	0.06	0.68
SITC 77 Total exports	1.38	0.64	2.26	0.79	1.18
SITC 78 Total exports	0.38	0.10	0.28	0.20	0.60
SITC 87 Total exports	0.00	0.05	0.08	0.11	0.18
SITC 88 Total exports	0.20	0.02	0.10	0.09	0.35
Total	2.11	0.89	3.35	1.38	3.40
Total exports to China (million)	17.9	33.2	734.8	718.3	14729.3

Notes P and C stands for parts and components; SITC codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

machines, telecommunication equipment and professional and scientific equipment, and in parts and components in electrical goods, road vehicles, and to some extent in photographic apparatus. Electrical goods and road vehicles form the bulk of India's GPN exports to Japan, and there has been an increase in the share of these products in India's exports to Japan from 0.07% in 1990 to 3.75% in 2012.

Examining India's network exports to Korea in 1990–2012 (Table 5), these have been mostly in final assembly in office machines and professional and scientific equipment, and in parts and components in electrical goods, road vehicles, and to some extent in telecommunication equipment and photographic apparatus. Only electrical goods are important in India's GPN exports to Korea, and disappointingly, there has been very little change in GPN goods in India's exports to Korea over time.

Table 4 India's parts and component and final assembly exports to Japan, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	32.7	29.1	52.7	36.3	17.2
SITC 75 Final assembly exports	67.3	70.9	47.3	63.7	82.8
SITC 76 P&C exports	0.0	42.5	72.7	55.0	12.0
SITC 76 Final assembly exports	0.0	57.5	27.3	45.0	88.0
SITC 77 P&C exports	76.5	62.0	75.1	64.0	75.4
SITC 77 Final assembly exports	23.5	38.0	24.9	36.0	24.6
SITC 78 P&C exports	93.7	69.0	79.8	92.1	92.6
SITC 78 Final assembly exports	6.3	31.0	20.2	7.9	7.4
SITC 87 P&C exports	40.0	24.0	14.5	5.9	15.4
SITC 87 Final assembly exports	60.0	76.0	85.5	94.1	84.6
SITC 88 P&C exports	12.0	48.6	20.5	13.3	43.2
SITC 88 Final assembly exports	88.0	51.4	79.5	86.7	56.8
As share of India's total exports to Japan (%)					
SITC 75	0.004	0.080	0.140	0.120	0.128
SITC 76	0.004	0.022	0.035	0.036	0.073
SITC 77	0.029	0.244	1.916	2.061	1.510
SITC 78	0.017	0.119	0.210	0.607	1.686
SITC 87	0.014	0.040	0.067	0.184	0.314
SITC 88	0.003	0.012	0.022	0.033	0.043
Total	0.070	0.517	2.390	3.042	3.754
Total exports to Japan (USD million)	1674.8	2208.9	1827.7	2455.2	6415.6

Notes P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

India's network exports to Malaysia in 1990–2012 (Table 6) have been mostly in final assembly in road vehicles, professional and scientific equipment, and photographic apparatus and in parts and components in electrical goods and telecommunication equipment and to some extent in office machines There has been a surprising decline in India's GPN exports to Malaysia from 21.3% as a share of total exports to

Table 5 India's parts and component and final assembly exports to Korea, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	8.9	100.0	14.6	31.2	29.7
SITC 75 Final assembly exports	91.1	0.0	85.4	68.8	70.3
SITC 76 P&C exports	0.0	5.5	89.6	89.9	55.6
SITC 76 Final assembly exports	0.0	94.5	10.4	10.1	44.4
SITC 77 P&C exports	100.0	98.5	94.7	90.5	64.2
SITC 77 Final assembly exports	0.0	1.5	5.3	9.5	35.8
SITC 78 P&C exports	100.0	85.1	97.5	86.8	93.2
SITC 78 Final assembly exports	0.0	14.9	2.5	13.2	6.8
SITC 87 P&C exports	0.0	14.4	25.1	7.9	31.2
SITC 87 Final assembly exports	100.0	85.6	74.9	92.1	68.8
SITC 88 P&C exports	0.0	5.6	2.9	0.1	50.5
SITC 88 Final assembly exports	100.0	94.4	97.1	99.9	49.5
As share of India's total exports to Korea (%)					
SITC 75	0.091	0.014	0.218	0.048	0.072
SITC 76	0.000	0.059	0.073	0.077	0.286
SITC 77	1.760	1.302	2.163	1.371	1.270
SITC 78	0.282	0.117	0.793	3.106	0.655
SITC 87	0.001	0.023	0.067	0.105	0.169
SITC 88	0.008	0.008	0.197	0.051	0.012
Total	2.1	1.5	3.5	4.8	2.5
India's total exports to Korea (USD million)	180.6	446.9	439.1	1519.6	4076.4

Notes P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

8.9% in 2012. Among network products, only telecommunication equipment, electrical goods and road vehicles have shares more than 1% of India's total exports to Malaysia.

Looking at India's network exports to Singapore (Table 7), parts and components and final assembly are equally important in office machines, telecommunication equipment, and electrical goods, with road vehicles being mostly final assembly, and professional and scientific equipment and photographic apparatus being mostly parts and components. As in the case of Malaysia, India's network exports to Singapore have been declining over time. Road vehicles remain the most important network export from India to Singapore.

Table 6 India's parts and component and final assembly exports to Malaysia, 1990–2012

	1990	1995	2000	2005	2012
AS per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	13.6	99.7	98.2	32.2	57.0
SITC 75 Final assembly exports	86.4	0.3	1.8	67.8	43.0
SITC 76 P&C exports	0.0	10.2	30.9	32.9	75.6
SITC 76 Final assembly exports	0.0	89.8	69.1	67.1	24.4
SITC 77 P&C exports	99.8	98.2	91.8	88.1	86.8
SITC 77 Final assembly exports	0.2	1.8	8.2	11.9	13.2
SITC 78 P&C exports	28.4	50.7	48.0	81.1	34.9
SITC 78 Final assembly exports	71.6	49.3	52.0	18.9	65.1
SITC 87 P&C exports	23.5	3.3	8.7	4.2	5.9
SITC 87 Final assembly exports	76.5	96.7	91.3	95.8	94.1
SITC 88 P&C Exports	2.2	3.0	2.1	1.9	5.6
SITC 88 Final assembly exports	97.8	97.0	97.9	98.1	94.4
As share of India's total exports to Malaysia (%)					
SITC 75 Total exports	0.102	9.379	16.592	0.511	0.735
SITC 76 Total exports	0.002	0.428	0.140	0.316	1.743
SITC 77 Total exports	9.541	4.706	2.906	2.167	1.724
SITC 78 Total exports	10.994	2.080	1.816	6.301	2.202
SITC 87 Total exports	0.354	0.345	0.590	0.817	2.225
SITC 88 Total exports	0.279	0.241	0.461	0.351	0.273
Total	21.272	17.180	22.504	10.463	8.902
Total exports to Malaysia (USD million)	149.3	392.0	531.0	1143.8	3791.2

Notes: P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus
Source: our calculations from UN Comtrade database

With respect to India's network exports to Thailand (Table 8), final assembly is more important in office machines, telecommunication equipment, professional and scientific equipment, and photographic apparatus with electrical goods and road vehicles being mostly parts and components. Interestingly, the share of network exports in India's total exports to Thailand has increased significantly from 2% in 1990 to 10.4% in 2012. This has been mostly due to a rise in exports of road vehicles in India's total exports to Thailand from 1.3% in 1990 to 7.9% in 2012.

Finally, turning to India's network exports to Vietnam (Table 9), final assembly is more important in office machines, road vehicles, professional and scientific equipment, and photographic apparatus with electrical goods being mostly parts and components, and both parts and components and final assembly important for

Table 7 India's parts and component and final assembly exports to Singapore, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	68.5	59.4	40.5	56.4	42.9
SITC 75 Final assembly exports	31.5	40.6	59.5	43.6	57.1
SITC 76 P&C exports	0.0	91.9	37.9	45.4	52.5
SITC 76 Final assembly exports	0.0	8.1	62.1	54.6	47.5
SITC 77 P&C exports	97.1	81.9	85.3	80.2	45.4
SITC 77 Final assembly exports	2.9	18.1	14.7	19.8	54.6
SITC 78 P&C exports	88.0	91.7	86.8	77.1	2.8
SITC 78 Final assembly exports	12.0	8.3	13.2	22.9	97.2
SITC 87 P&C exports	3.9	19.3	6.6	12.2	10.7
SITC 87 Final assembly exports	96.1	80.7	93.4	87.8	89.3
SITC 88 P&C exports	3.6	5.5	5.1	13.5	21.6
SITC 88 Final assembly exports	96.4	94.5	94.9	86.5	78.4
As share of India's total exports to Singapore (%)					
SITC 75 Total exports	6.480	6.408	1.901	0.807	0.411
SITC 76 Total exports	0.497	6.463	1.301	0.153	0.435
SITC 77 Total exports	2.828	2.381	3.468	1.542	1.354
SITC 78 Total exports	3.657	1.465	0.627	0.521	2.762
SITC 87 Total exports	0.455	0.419	0.570	0.341	1.418
SITC 88 Total exports	0.292	0.248	0.588	0.179	0.132
Total	14.209	17.384	8.454	3.543	6.511
Total exports to Singapore (USD million)	375.1	898.9	787.0	5427.6	13552.7

Notes P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

telecommunication equipment. There was very little change in the share of network exports in India's total exports to Vietnam over the period 1990–2012.

In Table 10, we provide a summary of the relative importance of parts and components and final assembly in India's network exports to the seven Asian countries we have looked at. It is clear that there is no clear pattern emerging—for some countries, parts and components may be important and in some other countries, final assembly for the *same* network trade product. The caveat herein that in many of the network trade categories, India's exports to individual countries is very low, so we are essentially discerning patterns from low volumes of trade. Among the six network trade categories, road vehicles dominate in India's exports to the East Asian region, followed by electrical goods. India's exports to the seven Asian countries in

Table 8 India's parts and component and final assembly exports to Thailand, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports	1.5	60.8	57.5	54.6	37.9
SITC 75 Final assembly exports	98.5	39.2	42.5	45.4	62.1
SITC 76 P&C exports	0.0	1.6	57.9	17.7	30.2
SITC 76 Final assembly exports	0.0	98.4	42.1	82.3	69.8
SITC 77 P&C exports	100.0	85.8	98.7	80.2	90.5
SITC 77 Final assembly exports	0.0	14.2	1.3	19.8	9.5
SITC 78 P&C Exports	98.6	98.0	98.5	98.2	78.6
SITC 78 Final assembly exports	1.4	2.0	1.5	1.8	21.4
SITC 87 P&C Exports	29.1	2.5	7.2	6.2	16.6
SITC 87 Final assembly exports	70.9	97.5	92.8	93.8	83.4
SITC 88 P&C Exports	29.6	0.0	7.6	0.5	6.4
SITC 88 Final assembly exports	70.4	100.0	92.4	99.5	93.6
As share of India's total exports to Thailand (%)					
SITC 75 Total exports	0.061	0.460	0.227	0.148	0.162
SITC 76 Total exports	0.019	0.278	0.073	0.142	0.149
SITC 77 Total exports	0.612	0.706	1.245	1.227	1.433
SITC 78 Total exports	1.269	0.525	0.730	3.833	7.893
SITC 87 Total exports	0.091	0.114	0.102	0.263	0.655
SITC 88 Total exports	0.010	0.009	0.061	0.191	0.069
Total	2.062	2.092	2.438	5.805	10.361
Total exports to Thailand (USD million)	244.3	471.5	525.2	1059.3	3454.1

Notes P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

professional and scientific equipment, telecommunication equipment, photographic apparatus and office machines have been low to date.

In terms of India's engagement with individual Asian countries in GPN exports, the only countries where there has been a large increase in the share of network exports in India's total exports has been Thailand, with some increase evident in the share of network exports in total exports to Japan as well. There has been a decline in the share of network exports in India's total exports to Malaysia and Singapore, with no clear pattern emerging for China and Vietnam. Overall, the analysis in this section indicates the very limited engagement of India in GPN trade with the more dynamic East and South-East Asian countries. Clearly, there is a need for a role for the Indian government in association with the private sector to facilitate India's greater entry in

Table 9 India's parts and component and final assembly exports to Vietnam, 1990–2012

	1990	1995	2000	2005	2012
As per cent of total exports in each SITC commodity group					
SITC 75 P&C exports		0.0	8.9	31.2	7.4
SITC 75 final assembly exports		100.0	91.1	68.8	92.6
SITC 76 P&C exports	0.0	97.8	54.2	88.1	49.0
SITC 76 final assembly exports	0.0	2.2	45.8	11.9	51.0
SITC 77 P&C exports	100.0	53.5	98.8	94.4	79.1
SITC 77 final assembly exports	0.0	46.5	1.2	5.6	20.9
SITC 78 P&C exports	28.7	6.3	99.9	28.2	5.8
SITC 78 final assembly exports	71.3	93.7	0.1	71.8	94.2
SITC 87 P&C exports	84.7	44.6	1.1	1.4	11.6
SITC 87 final assembly exports	15.3	55.4	98.9	98.6	88.4
SITC 88 P&C exports	100.0	0.2	40.4	15.6	8.2
SITC 88 final assembly exports	0.0	99.8	59.6	84.4	91.8
As share of India's total exports to Thailand (%)					
SITC 75 Total exports	0.000	0.043	0.010	0.063	0.030
SITC 76 Total exports	0.524	0.468	0.007	0.786	0.209
SITC 77 Total exports	0.058	1.124	0.795	0.997	0.893
SITC 78 Total exports	1.087	1.192	0.327	0.723	1.225
SITC 87 Total exports	0.094	0.056	0.312	0.186	0.214
SITC 88 Total exports	0.008	0.712	0.123	0.080	0.029
Total	1.771	3.596	1.574	2.834	2.600
Total exports to Vietnam (USD million)	16.96	123.99	195.39	633.47	3658.16

Notes P and C stands for parts and components; SITC Codes: SITC 75: Office machines and data processing machines, SITC 76: Telecommunications equipment, SITC 77: Electrical goods, SITC 78: Road vehicles, SITC 87: Professional and scientific equipment and SITC 88: Photographic apparatus

Source Our calculations from UN Comtrade database

GPN trade with East and South-East Asia. In the next section, we analyse the policy constraints in India's greater trade engagement with the rest of Asia in GPN trade.

4 Policy Constraints to India's Greater Engagement in GPN Trade with East Asia

In this section, we identified two key factors that have acted as policy constraints to India's greater engagement in GPN trade with East Asia. The first is trade barriers, and the second is institutional and logistical factors. We discuss them in turn.

Table 10 India's network exports to selected Asian countries, parts and component and final assembly, a summary

Network trade commodity	China	Japan	Korea	Malaysia	Singapore	Thailand	Vietnam
Office machines (75)	P	F	F	P/F	P/F	F	F
Telecom equipment (76)	F	F	P/F	P	P/F	PF	P/F
Electrical goods (77)	P/F	P	P	P	P/F	P	P
Road vehicles (&*)	P	P	P	F	F	P	F
Professional and scientific equipment (87)	F	F	F	P	P	F	P
Photographic apparatus (88)	F	P/F	P/F	P	P	F	F

Note: P: mostly parts and components, F: mostly final assembly; P/F: both parts and components and final assembly
Source obtained from Tables 3, 4, 5, 6, 7, 8, 9

i Trade Barriers

Trade within global production networks is more sensitive to tariff levels than the trade in final goods because of multiple border crossings. Consequently, a one percentage point reduction in tariff can lead to a decline in cost of production of a vertically integrated good by a multiple equal to the number of times the parts and components of the good has travelled across borders (Menon 2013). This implies that the level of tariffs in a particular country will make a difference to the decision of the firm whether or not to source components from that country, and high levels of tariffs in a country may deter off-shoring to that country. However, under the information technology (IT) agreement of the WTO, most network trade already travels at zero duties or at very low tariffs in Asia. In addition, the wide prevalence of duty drawback schemes in Asia and the location of supplier firms in export processing zones would imply that off-shoring may not be very sensitive to the restrictiveness of the trade regime in the partner countries. In the case of India, tariff levels still remain high relative to the Asian average for many products and acts as a significant barrier to GPN trade with East Asia.

ii Institutional and Logistical Factors

A key difference between trade in final goods and network trade is that unlike the former, where trade occurs mostly through arms-length transactions, trade in parts and component often occurs through bilateral repeated relationships between the sourcing firm (usually the MNC) and the supplier. Here, the quality of institutions prevailing in the country can play an important role for the sourcing firm based on

one country to decide to use a supplier from another country. Institutional quality here would encompass a range of institutions all the way from contract enforcement mechanisms such as the nature of the legal system to transactions cost-reducing institutions such as the ease of obtaining a licence to start a business and the ease of moving goods across borders through customs checkpoints. For trade in parts and component, a set of institutional constraints such as complex customs regulations at the border crossing can have an amplifying effect, and can greatly reduce the potential of GPN trade occurring in a particular country. In the case of goods in transit need to pass through several documentation clearances, ranging from port authority, customs, transport authority, veterinary and phytosanitary inspection section services depending on the type of goods traded (APEC 2013). Trade facilitation measures that simplify and rationalise customs and other administrative procedures that hinder, delay or increase the cost of moving goods across borders in South Asia, and between South and East Asia can play a significant role in facilitating network trade between India and East/South-East Asia (Ahmed et al. 2010). However, there is no South Asia wide agreement on transit trade, and bureaucratic practices in the shipment of goods across borders are cumbersome and costly. In addition, most of the Local Customs Stations that handle transit trade in South Asia have an inadequate storage facility, as well as banking and foreign exchange services (De 2011).

Furthermore, for off-shoring to be profitable, the firm out-sourcing the production of components for its final product needs low transport costs in terms of logistics in the countries where the suppliers are located in (Asian Development Bank 2009). This is all the more so with new business models of out-sourcing where lean production techniques, pioneered by Toyota, emphasise innovation and high quality among parts suppliers and combine this with sophisticated logistics to reduce inventory costs to a minimum (Gill and Kharas 2007). Athukorala (2013) finds that both logistical and institutional factors play an important role in explaining India's low volumes of network trade, using a gravity model of trade flows.

India's weak performance in logistics is apparent from Table 11, which provides information on the quality of customs and logistics competence, as well as tracking and tracing and timeliness performance (the data is obtained from the World Bank's Logistics Performance Database). India does better than Indonesia but has

Table 11 Logistics performance and individual countries in South and South-East Asia—2012

	LPI rank	LPI score	Customs	Infrastructure	International shipments	Logistics competence	Tracking and tracing	Timeliness
India	46	3.08	2.77	2.87	2.98	3.14	3.09	3.58
Indonesia	59	2.94	2.53	2.54	2.97	2.85	3.12	3.61
Malaysia	29	3.49	3.28	3.43	3.4	3.45	3.54	3.86
Thailand	38	3.18	2.96	3.08	3.21	2.98	3.18	3.63

Note LPI: Logistics Performance Index
Source World Bank's Logistics Performance Database (lpisurvey.wordlbank.org)

Fig. 1 Ease of doing business in Asia. *Source* Asian Development Bank (2008)

worse logistics indicators than Malaysia and Thailand. However, India has low performance in the World Bank's ease of doing business indicator, suggesting significant transactions costs for MNCs to start production in the country (Fig. 1). Therefore, for Indian policy-makers to facilitate trade in network products, it would be essential to develop sophisticated logistical systems along the corridor that are easily accessible to all firms located in the corridor, as well as reduce transactions costs in doing business in these countries.

5 Conclusions

Global production networks are a phenomenon of great significance in world trade and production, especially in Asia. While East Asia and South-East Asia have rapidly established themselves as major players in global production network trade, India and other South Asian countries have lagged behind. We examine and we look more closely at India's performance in network trade, especially in relation to East and South-East Asia. In terms of India's engagement with individual Asian countries in GPN exports, the only countries where there has been a large increase in the share of network exports in India's total exports has been Thailand, with some increase evident in the share of network exports in total exports to Japan as well. There has been a decline in the share of network exports in India's total exports to Malaysia and Singapore, with no clear pattern emerging for China, Korea and Vietnam. Overall, the analysis indicates the very limited engagement of India in GPN trade with the more dynamic East and South-East Asian countries. Clearly, there is a need for a role for the Indian government in association with the private sector to facilitate India's greater entry in GPN trade with East and South-East Asia.

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Chapter 7
Beyond Commodities: India-Latin America Supply Chain Trade

Ganeshan Wignaraja

1 Introduction

Since opening up to trade and investment in 1991, India has actively built economic ties with major powers and neighbours over recent decades with varying degrees of success. Yet Latin America was conspicuously absent due to vast geographical distance, a lack of cultural and linguistic linkages, few diaspora connections and the region's relative unimportance in Indian trade diplomacy (Tharoor 2012; Desai 2015). However, this is gradually changing with increased trade between India and Latin America (Moreira 2010; ECLAC 2011; ADB, ADBI and IDB 2012). Specialization and trade have involved Indian final goods manufactures and information technology (IT) services in exchange for Latin American commodities. Indian hydrocarbon imports to Latin America also rose in the 2000s reflecting excess refining capacity in India (Bhojwani 2016). Nonetheless, it is unclear whether inter-regional trade has deepened into parts and components trade or global supply chain (GSC) trade which is vital for a sustainable economic partnership between the two.

This paper examines patterns of India-Latin America[1] GSC trade and its links with national business environments, trade diplomacy and free trade agreements (FTAs). Using the so-called gross trade approach (see Constantinescu et al. 2015), it charts patterns of India-Latin American GSC trade by intermediate goods sectors and trading partners since 2000. This exercise reveals the impact of the global financial crisis on India-Latin America GSC trade and projects its value through to 2025. It then compares national business environments across countries (see Lall 1990;

[1]This paper uses the term Latin America to cover 26 economies in Latin America and the Caribbean (see Table 1).

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Dabla-Norris et al. 2013) to identify barriers to GSC trade between India and Latin America. Finally, it assesses efforts at trade diplomacy and FTAs.

2 Mapping Patterns of GSC Trade

GSC trade is described as production networks, production fragmentation or global value chains, but essentially mean the same basic concept with subtle differences. It entails a sophisticated form of industrial organization which is different from a textbook idea of a single large vertically integrated factory in any one country.

It involves different production stages, such as design, assembly and marketing, across different countries, linked by a complex web of trade in intermediate inputs and final goods (Jones and Kierzkowski 1990). A lead company usually a multinational corporation coordinates the different production stages and trade.

For example, Toyota has sold 1.8 million units of the Toyota Prius (the world's first mass-produced hybrid hatchback)—in the USA between 2000 and January 2017. The Prius for the US market was designed in Japan and is largely assembled there, but some parts and components are made in Southeast Asia and China. Parts and components trade occur between Japan and its Asian suppliers while Japan exports the Prius to the USA. Toyota coordinates final assembly, allocates work to various global suppliers, ensures that quality assurance and technical standards are met and undertakes expensive design and marketing activities. A recent empirical study has portrayed these complex intra-firm relations as "a barrel-shaped tier structure of the Toyota's supply network, highlighting the fact that the previously hypothesized pyramidal structure is incorrect" (Kito et al. 2014, p. 20).

GSC trade has been interwoven with the globalization of trade and investment in the late twentieth century. As Baldwin and Lopez-Gonzales (2015) observe:

> Internationalization of production has given rise to complex cross-border flows of goods, know-how, investment, services and people – call it supply-chain trade for short…Among economists, however, it is typically viewed as trade in goods that happens to be concentrated in parts and components. (Baldwin and Gonzales 2015, p. 1683)

Early signs of GSC activity were visible around the 1970s in the clothing and electronics industries. It has since penetrated many industries including other consumer goods, food processing, automotives, aircraft, and machinery. The role of services in GSC trade (e.g. engineering services, information technology services and professional services) is increasingly important but has been underestimated due to serious data problems.

The mainstay of empirical work on GSC trade by international economists has involved defining trade in parts and components using national trade data from the UN Comtrade Database (e.g. see Constantinescu et al. 2015). This so-called gross trade approach affords comprehensive, consistent and recent time series coverage of parts and components trade for nearly all countries in the world. More recently, with the development of similar international input–output tables for some countries, there

has been growing interest in measuring trade in value added (e.g. WTO and IDE-JETRO 2011). Growth in the measured degree of imported input dependence between two points in time is interpreted as an indicator of GSC trade. However, input–output tables are either lacking or dated for several Latin American economies.

Accordingly, this paper applies the gross trade approach to examine trade in parts and components between India and Latin America. There is no unique method to decompose international trade data into parts and components and final assembled goods. An approximate way is to list specific items in which GSC imports are significantly concentrated and to use the total value of these items as an indicator of a country's GSC trade. Based on Constantinescu et al. (2015), three import categories were selected: (i) parts and accessories of capital goods except transport equipment, (ii) parts and accessories of transport equipment and (iii) industrial supplies not elsewhere specified (processed). Constantinescu et al. (2015) report the total value of parts and components imports expressed as a ratio of total manufactured exports.

In interpreting the data, it is worth bearing in mind that the world economy seems to be recovering. The world economy grew at 3.1% in 2016 and is forecast to grow at 3.6% in 2017 and 3.7% in 2018 (IMF 2017). The main reason for the recovery is that successive shocks including the global financial crisis of 2007–2009 and the commodity price falls of 2014–2015 are abating. Many affected economies are experiencing cyclical recoveries. The IMF forecasts upward revisions to growth in the Euro area, Japan, Asia and Russia. India remains one of the world's fastest-growing economies (with the IMF expecting growth of 7.4% in 2018) while Latin America is projected to transit from negative to positive growth. Global downside risks particularly political uncertainty and trade protectionism under President Trump's "America First" nationalist approach could tilt the global outlook to the downside. India's outlook could be dampened by the transitory effects of demonetization, the implementation of the goods and services tax (GST) and subdued private sector investment. Nonetheless, once these risks abate, one might reasonably expect world supply chain trade (including that between India and Latin America) to expand in the next few years.

Research using the gross trade approach shows that although India and Latin America had different historical involvement, their shares of world supply chain trade rose since the financial crisis. India is a latecomer and its share of world supply chain exports rose from 0.45 to 0.84% between 2001–2004 and 2009–2013 (Wignaraja 2016). Latin America was an earlier entrant and its share rose from 5.14 to 5.56% between the two sub-periods. Mexico dominates the regional figure with a share that increased from 3.82 to 4.10%. Meanwhile, Brazil's share fell from 0.45% to 0.35%, Argentina's rose from 0.09 to 0.22% and Chile's stagnated at 0.01%. The share for the rest of Latin America increased from 0.77 to 0.88%.

India-Latin America GSC trade grew rapidly from a small base since 2000. Figure 1 shows the annual value of India's total GSC imports and exports to Latin America (in current US$) from 2000 to 2016 with a projection to 2025. During 2000–2016, India's GSC imports from Latin America (in current US dollar terms) grew at 20.4% per year while its GSC exports to Latin America grew at 15.7%. In 2016, the value of India's GSC imports from Latin America was $3.1 billion (up

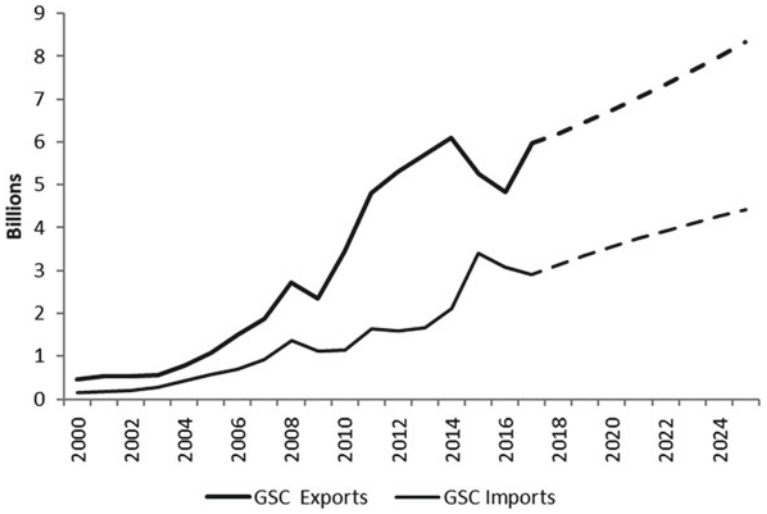

Fig. 1 India's GSC Trade with LAC (US$ Billion) GSC Global supply chain; LAC Latin American and the Caribbean *Source* Author's calculations based on UN Comtrade Database. Accessed April 18, 2017. https://comtrade.un.org/data/. *Note* Projections for 2017–2025 were estimated using the Hodrick-Prescott filter in Eviews

from a miniscule US$ 157 million in 2000) while the value of its GSC exports to Latin America was $4.8 billion (up from $467 million in 2000). Accordingly, the value of India-Latin America GSC trade was nearly $8 billion in 2016 (or equivalent to 28.1% of total India-Latin America trade).

India-Latin America GSC trade is conservatively projected to increase to $12.8 billion in 2025 (see Fig. 1). This projection consists of India's GSC imports from Latin America of $4.5 billion and its GSC exports of $8.3 billion. The projections used the Hodrick-Prescott Filter[2] contained in the E-Views Econometrics Package. Many risks surround a long-term projection for GSC trade between India and Latin America and the positive outlook is likely to be tilted to the downside. There are several risks around an evolving new normal world economy and shifts in the global balance of economic power. Some of these include the imposition of trade restricting measures, macroeconomic policy uncertainty, sudden falls in growth and demand in India and Latin America, and disruptive technological changes (e.g. artificial intelligence and robotisation). If these risks are not effectively managed, the expansion of India-Latin America GSC trade may be pegged back.

The financial crisis had a limited impact on India-Latin America GSC trade. The emergence of GSC trade between India and Latin America was visible before the financial crisis. Such trade increased from $0.62 billion to $2.2 billion between 2000

[2]It is a data smoothening technique commonly used in macroeconomics to remove short-term fluctuations that are associated with the business cycle, thereby revealing long-run trends. The use of the Hodrick-Prescott Filter presumes that deviation from potential trade is relatively short term and tends to be corrected fairly quickly.

and 2006. It doubled during the crisis to $4.1 billion in 2008 and doubled again after the crisis to $8.2 billion in 2014. It peaked at $8.7 billion in 2015 and fell in 2016.

Applying the proxy suggested by Constantinescu et al. (2015) confirms the rapid expansion of India-Latin America GSC trade despite a brief fall after the crisis. Figure 2 shows the ratio of India's imported parts and components to manufactured exports with Latin America. The ratio increased in the years before the crisis—from 20.1 to 29.3% between 2000–2002 and 2004–2006—and was high during the crisis at 30.7% in 2007–2009. It then fell in the immediate aftermath of the crisis to 19.8% in 2010–2013 but soon recovered to previous levels of 30.0% in 2014–2016. Interestingly, this ratio peaked at 36.4% in 2015 and fell to 32.3% in 2016.

India-Latin America GSC trade is characterized by commodity concentration. Figure 3 shows the shares of the three main categories in India-Latin America GSC trade for 2000–2002 and 2014–2016. The bulk of such trade occurs in industrial supplies and the pattern has been stable over the period. The share of industrial supplies in India's GSC imports from Latin America rose significantly from 73.7 to 87.4% between 2000–2002 and 2004–2016 while the sector's share in India's GSC exports to Latin America rose from 76.5 to 78.4%. Meanwhile, transport equipment

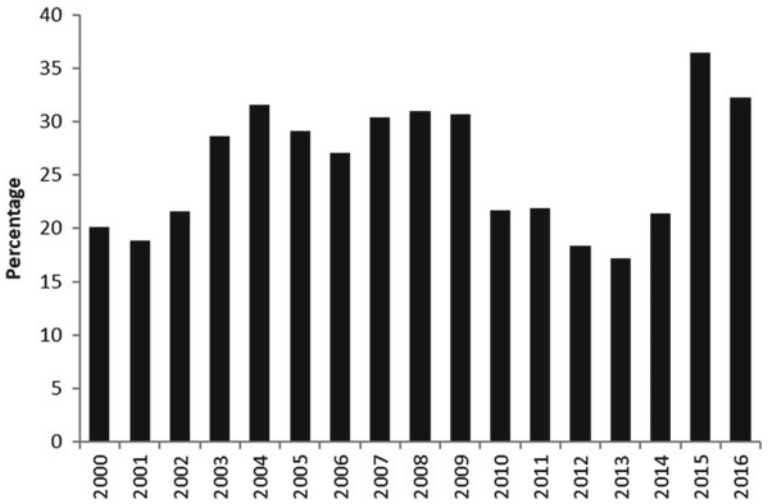

Fig. 2 India's Share of Imported Intermediate Goods to Manufacturing Exports with LAC (%). *Source* Author's calculations based on UN Comtrade Database. Accessed April 18, 2017. https://comtrade.un.org/data/. *Note* Classification of intermediate goods, referred to as parts and components, is based on the concept used by Constantinescu, Mattoo, and Ruta (2015). Constantinescu et al. 2015. The Global Trade Slowdown: Cyclical or Structural? IMF Working Papers. No. WP/15/6. Washington, DC: International Monetary Fund. Intermediate goods are defined as the sum of the following three BEC Categories: 1 industrial supplies not elsewhere specified, processed (BEC 22), processed; 2 parts and accessories of capital goods except transport equipment (BEC 42); and 3 parts and accessories of transport equipment (BEC 53). Manufacturing products is defined as the sum of SITC categories 5, 6, 7, and 8 (less 68)

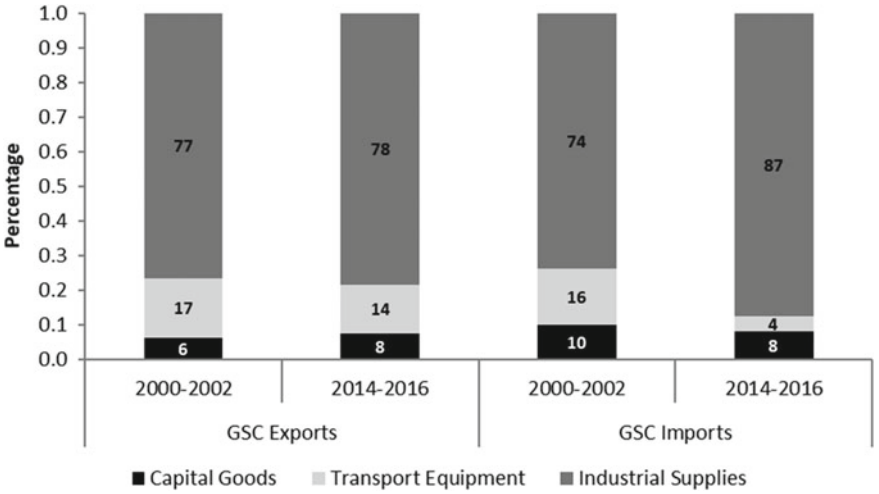

Fig. 3 India's GSC Trade with LAC by Commodity (%) GSC Global supply chain; LAC Latin American and the Caribbean *Source* Author's calculations based on UN Comtrade Database. Accessed April 18, 2017. https://comtrade.un.org/data/

fell significantly in India's GSC imports from Latin America from 16.4 to 4.3% and fell in India's GSC exports from 17.0 to 14.0%. There is limited inter-regional trade in capital goods whose share of India's GSC imports from Latin America fell from 9.9% to 8.3% while its share of India's GSC exports from Latin America rose from 6.4 to 7.6%.

A few Latin America economies dominate GSC trade with India. Table 1 provides the shares of Latin American economies in GSC trade with India for 2000–2002 and 2014–2016. The rise of the Pacific Alliance and the decline of Mercosur are visible in GSC trade with India.[3] The share of the Pacific Alliance in India's GSC imports rose significantly from 29.0 to 45.2% between 2000–2002 and 2014–2016 and its share of India's GSC exports rose from 39.8 to 48.6%. Mercosur's share of India's GSC imports fell from 69.9% to 37.4% and its share of India's GSC exports fell from 46.9% to 39.1%. Caricom and the rest of Latin America experienced a rise in their shares of India's GSC imports and a decline in their shares of India's GSC exports.[4]

Seven Latin American economies dominate GSC trade with India. In spite of a large fall in its share of India's GSC imports between 2000–2002 and 2014–2016, Brazil remains India's largest GSC trader (with 29.4% of GSC imports and 29.7% GSC exports). Mexico is second with a rise in its share of India's GSC exports over

[3]The Pacific Alliance consists of Chile, Columbia, Mexico and Peru. Mercosur's members are Argentina, Brazil, Paraguay, Uruguay and Venezuela.

[4]Caricom's share in India's GSC imports rose from 0.2% to 0.3% between 2000 and 2016 while its shares in India's GSC exports fell from 2.8% to 1.9%. The rest of Latin America's share in India's GSC imports rose from 0.9% to 17.2% while their share in India's GSC exports fell from 10.5% to 10.4%.

Table 1 India's GSC Trade with Latin America Economies

	India's Total GSC Exports (in US$ millions (2014–2016)		India's Total GSC Imports (in US$ millions (2014–2016)		Share of Total India's GSC Exports (%)		Share of Total India's GSC Imports (%)	
	2000–2002	2014–2016	2000–2002	2014–2016	2000–2002	2014–2016	2000–2002	2014–2016
Latin America	1541.55	16,187.14	529.12	8580.12	100.0	100.0	100.0	100.0
Brazil	451.81	4802.37	277.97	2522.36	29.3	29.7	52.5	29.4
Mexico	359.96	4277.96	91.95	1130.08	23.4	26.4	17.4	13.2
Peru	59.32	1417.69	31.36	1127.26	3.8	8.8	5.9	13.1
Colombia	110.99	1480.42	2.69	982.08	7.2	9.1	0.5	11.4
Chile	82.58	691.46	27.37	637.61	5.4	4.3	5.2	7.4
Argentina	124.91	939.67	72.93	276.54	8.1	5.8	13.8	3.2
Dominican Rep.	17.80	229.92	0.52	1260.55	1.2	1.4	0.1	14.7
Venezuela	82.19	153.45	12.57	78.95	5.3	0.9	2.4	0.9
Ecuador	15.15	386.29	1.72	72.17	1.0	2.4	0.3	0.8
Costa Rica	10.97	82.91	1.87	133.53	0.7	0.5	0.4	1.6
Guatemala	26.00	360.57	0.09	0.34	1.7	2.2	0.0	0.0
Bahamas	1.89	1.82	0.00	2.85	0.1	0.0	0.0	0.0
Honduras	33.33	330.21	0.38	2.22	2.2	2.0	0.1	0.0
Uruguay	48.07	219.75	2.49	6.73	3.1	1.4	0.5	0.1
Trinidad and Tobago	15.50	144.23	0.05	12.42	1.0	0.9	0.0	0.1
Bolivia	2.21	45.94	2.78	313.42	0.1	0.3	0.5	3.7
Panama	41.58	109.67	0.09	1.91	2.7	0.7	0.0	0.0
Paraguay	13.96	173.02	1.28	7.94	0.9	1.1	0.2	0.1
El Salvador	6.56	107.34	0.08	0.43	0.4	0.7	0.0	0.0

(continued)

Table 1 (continued)

	India's Total GSC Exports (in US$ millions (2014–2016)		India's Total GSC Imports (in US$ millions (2014–2016)		Share of Total India's GSC Exports (%)		Share of Total India's GSC Imports (%)	
	2000–2002	2014–2016	2000–2002	2014–2016	2000–2002	2014–2016	2000–2002	2014–2016
Nicaragua	10.78	69.51	0.02	0.59	0.7	0.4	0.0	0.0
Haiti	8.20	61.10	0.04	2.32	0.5	0.4	0.0	0.0
Jamaica	8.31	32.53	0.02	0.67	0.5	0.2	0.0	0.0
Guyana	4.09	30.43	0.16	0.40	0.3	0.2	0.0	0.0
Suriname	2.24	24.11	0.68	6.00	0.1	0.1	0.1	0.1
Barbados	2.37	7.55	0.00	0.16	0.2	0.0	0.0	0.0
Belize	0.79	7.23	0.02	0.63	0.1	0.0	0.0	0.0

GSC Global supply chain; *LAC* Latin American and the Caribbean
Source Author's calculations based on UN Comtrade Database. Accessed April 18, 2017. https://comtrade.un.org/data/

the same period. In 2014–2016, Mexico had 13.2% of India's GSC imports and 26.4% of its GSC exports. Peru and Columbia come next with notable increases in GSC trade with India. In 2014–2016, Peru accounted for 13.1% of India's GSC imports and 8.8% of its GSC exports while Columbia made up 11.4% of India's GSC imports and 9.1% of its GSC exports. Other important Latin American GSC traders with India include Chile, Argentina and unexpectedly, Dominican Republic.

3 Assessing National Business Environments

Model-based studies indicate that economic gains can arise from trade liberalization and improving connectivity between India and Latin America (e.g. Mukhopaday et al. 2012). Many location-specific and policy factors influence firms to build the requisite manufacturing capabilities to participate in GSC trade (Kimura 2016). Numerous government regulations affect trade, logistics, business start-up, corporation tax and resolving disputes. Supply-side factors and markets matter including trade-related infrastructure, labour productivity, finance and institutions. Crime and corruption affect firms. Lall (1990) and Dabla-Norris et al. (2013) suggest that cross-country comparisons of national business environments provide valuable policy insights. ADB, ADBI and IDB (2012) and World Bank (2015) offer preliminary studies of barriers to Asia-Latin America trade. Drawing on this tradition, various indicators of the business environment in India and Latin America are compared to identify barriers to GSC trade between them. To keep the task manageable, these indicators are examined under four headings: (i) trade and investment regulations, (ii) behind-the-border regulations, (iii) trade infrastructure and logistics and (iv) labour productivity (see Table 2).

3.1 Trade and Investment Regulations

Open trade and investment regimes are the cornerstone for enhancing India-Latin America GSC trade. Low import barriers facilitate trade in parts and components, resource allocation according to comparative advantage and competition for firms to upgrade labour productivity and technological capabilities. As GSC trade is largely driven by multinationals, low barriers to trade and investment encourages inter-regional capital flows in GSC manufacturing activities, technology transfer and marketing linkages.

India's import tariffs for manufactures have fallen since the mid-2000s and are on par with the average for Latin America. Between 2006 and 2016, India's average tariffs for manufactures fell from 16.4% to 10.1% compared a reduction from 9.3% to 9.0 for Latin America. Three Pacific Alliance economies (Mexico, Peru and Columbia) experienced large tariff reductions to historically low levels of under

Table 2 Business Environment in India and LAC Economies

	Simple average MFN tariffs—manufactured goods (%)[a]		FDI regulatory restrictiveness index[c]		Starting a business (2017)[c]		Infrastructure quality, 2016–2017 (1–7 worst to best)[d]		Overall LPI Score (1 = low to 5 =high)[b]		Labour productivity (GDP per person employed)[e]	
	2006	2016	2006	2016	No. of procedures	Time (days)	Port	Air transport	2007	2017	As a % of USA-2015	Annual average growth (2013–2015)
India	16.4	10.1	***0.282***	***0.212***	13	26	4.4	4.5	3.07	3.42	13	5.2
Latin America	9.3	9	–	–	8	31.6	3.9	4.3	2.57	2.68	29	−0.1
Brazil	12.6	14.1	0.095	0.101	11	79.5	2.9	3.9	2.75	3.09	25	−1.3
Mexico	13.3	5.7	0.211	0.193	8	8.4	4.4	4.6	2.87	3.11	37	0.9
Peru	9.7	2.4		0.077	6	26	3.6	4.1	2.77	2.89	23	2.2
Colombia	11.8	4.1	–	0.026	6	9	3.7	4.2	2.5	2.61	23	2.1
Dominican Rep.	7.8	6.4	–	–	7	14.5	4.6	4.8	2.38	2.63	29	3.7
Argentina	12.6	14.2	0.025	0.031	14	25	3.8	4.1	2.98	2.96	42	0.4
Chile	6	6	0.063	0.057	7	5.5	4.9	4.9	3.25	3.25	46	0.7
Bolivia	8.1	11.5	–	–	14	45	2.2	3.9	2.31	2.25	12	3.4
Ecuador	11.3	10.9	–	–	11	48.5	4.7	5.1	2.6	2.78	25	0.2
Guatemala	5	4.9	–	–	7	19.5	3.7	3.9	2.53	2.48	22	3.3
Honduras	4.9	5	–	–	11	13	4.5	4.1	2.5	2.46	–	–
Paraguay	10	9.8	–	–	7	35	3.1	2.6	2.57	2.56	–	–

(continued)

Table 2 (continued)

	Simple average MFN tariffs—manufactured goods (%)[a]		FDI regulatory restrictiveness index[c]		Starting a business (2017)[c]		Infrastructure quality, 2016–2017 (1–7 worst to best)[d]		Overall LPI Score (1 = low to 5 =high)[b]		Labour productivity (GDP per person employed)[e]	
	2006	2016	2006	2016	No. of procedures	Time (days)	Port	Air transport	2007	2017	As a % of USA-2015	Annual average growth (2013–2015)
Uruguay	10.7	10.6	–	–	5	6.5	4.8	4.4	–	2.97	38	3
Trinidad and Tobago	6.6	9.4	–	–	7	10.5	3.8	4.3	–	2.4	60	−1.5
Venezuela	12.7	13	–	–	20	230	2.6	2.7	2.62	2.39	36	−4.7
Costa Rica	4.9	4.6	–	0.049	9	22.5	3.2	4.6	2.55	2.65	27	0.6
Panama	6.4	6	–	–	5	6	6.3	6.2	2.89	3.34	–	–
El Salvador	5	5			8	15.5	3.5	4.3	2.66	2.71	–	–
Nicaragua	4.9	4.9	–	–	6	13	2.8	3.6	2.21	2.53	–	–
Haiti	2.4	4.2	–	–	12	97	–	–	2.21	1.72	–	–
Jamaica	5.8	6.7	–	–	2	10	4.7	5	2.25	2.4	18	−0.5
Guyana	9.6	9.3	–	–	7	18	–	–	2.05	2.67	–	–
Suriname	–	9.2	–	–	14	84.5	–	–	–	–	–	–

(continued)

Table 2 (continued)

	Simple average MFN tariffs—manufactured goods (%)[a]		FDI regulatory restrictiveness index[c]		Starting a business (2017)[c]		Infrastructure quality, 2016–2017 (1–7 worst to best)[d]		Overall LPI Score (1 = low to 5 =high)[b]		Labour productivity (GDP per person employed)[e]	
	2006	2016	2006	2016	No. of procedures	Time (days)	Port	Air transport	2007	2017	As a % of USA-2015	Annual average growth (2013–2015)
Barbados	11	9.6	–	–	8	21.5	4.9	5.3	–	–	31	0.3
Bahamas	31.2	36.1	–	–	8	21.5	–	–	–	2.75	–	–
Belize	9.3	9.3	–	–	9	43	–	–	–	–	–	–

Note Latest tariffs for Barbados, Suriname and Trinidad and Tobago is from WTO Tariff Profiles 2015

Note [1 = extremely underdeveloped—among the worst in the world; 7 = extensive and efficient—among the best in the world]| 2013–14 weighted average

World Economic Forum. The Global Competitiveness Report 2016–2017. Accessed April 2017 http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf

[a]WTO Tariff Profiles 2006 and WTO Tariff Profiles 2016. Accessed April 2017. http://stat.wto.org/TariffProfile/WSDBTariffPFExportFile.aspx?Language=E&Country=

[b]International LPI Global Ranking. Accessed April 2017. http://lpi.worldbank.org/international/global/

[c]World Bank Doing Business Rankings 2017. Accessed April 2017. http://www.doingbusiness.org

[e]The Conference Board Total Economy Database, May 2016. Accessed April 2017. http://www.conference-board.org/data/economydatabase/

6% while Chile maintained low tariffs. In contrast, Mercosur's largest economies—Argentina (from 12.6 to 14.2%) and Brazil (from 12.6 to 14.1%)—increased their tariffs well above Indian levels.

India's FDI regime has improved since the mid-2000s but is less open to FDI than some Latin American economies. An FDI regulatory restrictiveness index is available from the OECD for 2006 and 2016. This tries to gauge the restrictiveness of a country's FDI regulations by considering various restrictions: foreign equity limitations, approval mechanisms, restrictions on employing foreign labour, and operational restrictions (e.g. restrictions on capital repatriation). A high score on the FDI index indicates greater restrictiveness. However, the FDI index does not fully measure how FDI regulations are implemented and state ownership in key sectors are not captured. Furthermore, India is included but the FDI index only covers Argentina, Brazil, Chile and Mexico for both years and Columbia, Costa Rica and Peru for 2016.

Keeping these qualifications in mind, India's FDI index fell from 0.282 to 0.212 between 2006 and 2016. The average FDI index for the four Latin American economies, which fell from 0.0985 to 0.0955, indicates greater openness to FDI than India. Surprisingly, Mexico—the largest Pacific Alliance economy—is the most restrictive to FDI in Latin America. Mexico's FDI index fell slightly from 0.211 to 0.193. Chile—another key Pacific Alliance economy—saw its FDI index falling from 0.063 to 0.057. The two large Mercosur economies had a rise in their FDI indices with Brazil's from 0.095 to 0.101 and Argentina's from 0.025 to 0.031. Meanwhile, the two smaller Pacific Alliance economies—Columbia and Peru—as well as Costa Rica are relatively open to FDI in 2016.

3.2 Behind-the-Border Regulations

Transparent, predictable and fair behind-the-border regulations help to create an environment with low transactions costs for India-Latin America GSC trade. It facilitates the entry of FDI into GSC manufacturing activities and domestic firms as competitive industrial suppliers. A key indicator of behind-the-border regulations is the number of licences and permits required to start a business and the time taken (in calendar days) which the World Bank provides for 2016.

Starting a business in India takes an average of 29 days to complete 13 procedures. This compares favourably with the Latin American average of 31.6 days to undertake eight procedures. Within Latin America, The Pacific Alliance economies are noteworthy for having streamlined business start-up procedures which are better than India. Chile (5.5 days for 7 procedures), Mexico (8.4 days for 8 procedures) and Columbia (9 days for 6 procedures) are stellar examples. Peru (26 days for 6 procedures), however, lags more efficient Pacific Alliance economies, takes a similar time to complete less start-up procedures than India. The Mercosur economies vary considerably in the efficiency of business start-up regulations. Uruguay seems the most efficient (6.5 days for 5 procedures) while in Venezuela it takes as much as 230 days for 20 procedures. Brazil seems to be tilted towards the less business-friendly end

of spectrum, requiring 79.5 days to complete 11 procedures while Argentina takes 25 days to undertake 14 procedures.

3.3 Trade Infrastructure and Logistics

GSCs involve the dispersion of manufacturing activities over geographical space connected by trade in parts, components and services. Efficient and reliable infrastructure and logistics reduce the costs of undertaking GSC manufacturing and trade. However, the vast geographical distance between India and Latin America means lengthy supply chains which are susceptible to many barriers that can obstruct the easy movement of goods from one link in the chain to the next. Poor ports and airports, customs delays and weak logistics systems means barrier-related costs can be substantial and contribute to long lead times, high inventory costs, tying up working capital and cancelled orders.

Inter-country comparisons of the quality of trade infrastructure such as ports and airports are difficult due to measurement problems, statistical gaps, and the inherently subjective nature of such evaluations (ADB and ADBI 2009). The World Economic Forum provides one such evaluation for 2016–2017 based on a survey of global business leaders' perceptions and hard data indicators. A value of 7 in the scoring system used shows the best possible situation and 1 the worst. There seems little difference between India (4.5) and Latin America (4.3) in the quality of airports. In terms of the quality of ports, however, India (4.4) fares quite well compared to the average for Latin America (3.9). Within the Pacific Alliance, Chile (4.9) and Mexico (4.4) have better ports than Colombia (3.7) and Peru (3.6). Meanwhile, the quality of ports in Mercosur appears to be a concern for business. Paraguay (4.5) and Argentina (3.8) fare better than Uruguay (3.1), Brazil (2.9), and Venezuela (2.7).

Similar problems beset inter-country comparisons of trade logistics. The World Bank's Logistics Performance Index (LPI)—based on a worldwide survey of operators—indicates the efficiency with which goods can be moved into and inside a country. The LPI captures customs clearance, the quality of logistics services and the quality of infrastructure. A value of 5 shows high efficiency and 1 shows low efficiency. The data suggest although LPI scores have improved between 2007 and 2017, India's (3.42) trade logistics seem more efficient than the average for Latin America (2.68). There seems to be a long tail of logistics under-performance in Latin America as even the best performers, Chile and Mexico, are below Indian levels.

3.4 Labour Productivity

Labour productivity growth and lower unit costs are key determinants of the competitiveness of firms in India-Latin America GSC trade. High labour productivity levels are associated with improvements in price, quality and delivery to world

standards. However, measuring labour productivity is problematic and comparable cross-country data is lacking for developing countries. Fortunately, a crude measure—GDP per person employed (as a percentage of US levels)—is provided by the Canadian Conference Board Total Economy Database for India and key Latin American economies for 2015. Even after a decade or more of catching up, productivity levels in India and Latin America remain considerably lower than mature economies. In 2015, India's output person was only 11% of the US level while the average for Latin America was 29%. Among Pacific Alliance economies, Chile (46%) has the highest output per person while Mexico (37%) is next. Columbia and Peru (both 23%) come some way behind. Argentina (42%) top's Mercosur's output per person league while Brazil (25%) and others lag.

4 Role of Trade Diplomacy and FTAs

After decades of lacklustre interest, signs of enhanced trade diplomacy between India and Latin America are emerging. There has been a flurry of visits by the Indian Prime Minister to Latin America. In July 2014, a month after his election, Prime Minister Modi participated in the BRICs Summit in Brazil. He met with several regional leaders and promised augmented Indian engagement with Latin America. In June 2016, after a thirty-year gap in Prime Ministerial visits, Modi visited Mexico to develop bilateral relations in trade, investment and technology. In 2018, Modi is scheduled to attend the G-20 Summit in Argentina.

Recent Indian diplomatic efforts reflect growing trade with a $5 trillion Latin American market, a bid to improve energy security (Brazil, Columbia, Mexico and Venezuela supply 20% of Indian crude oil imports) and a desire to compete with China's significant economic presence in Latin America. Latin America's aim to boost Indian ties is to lower overdependence on Chinese imports (which are viewed as harmful to local business) and the risks of the Trump administration's trade protectionism. However, one of the main obstacles for greater Indian foreign investment in Latin America is financial. It is argued that India lacks the Chinese-level financial resources (both state and private sector) for overseas investment and is far more stringent on the bottom line (Bhojwani 2016). It is also argued that some Latin American countries fail to inspire the confidence of Indian investors due to strict land ownership regulations, high trade barriers, transport costs and poor internal connectivity.

Little FTA activity exists between India and Latin America (Wignaraja et al. 2015). But reflecting India's greater interest in Latin America, attempts are being made to expand the coverage of goods trade in the two limited FTAs in effect. The India-Chile Preferential Trade Agreement (PTA)—in effect from August 2007—provided tariff concessions on a few tariff lines. India's offer list was 178 tariff lines while Chile's was 296 tariff lines. An expanded PTA was implemented in May 2017 with improved tariff concessions were provided by both sides to increase two-way goods trade. India's offer list rose to 1031 tariff lines and Chile's to 1798 tariff lines. Similarly, the June 2009 India-Mercosur PTA was limited to tariff concessions on

450 items. Talks began in January 2017 on an expanded PTA with the ambition of providing tariff concessions on 3000 items.

Recent efforts at trade diplomacy and FTAs are positive moves to foster India-Latin America GSC trade. The expanded India-Chile PTA and an eventual expanded India-Mercosur PTA will improve market access and two-way goods trade in commodities, processed food, engineering products and pharmaceuticals. However, murky non-tariff measures (NTMs) and key deep integration issues for upgrading GSC trade (such as investment, trade facilitation, intellectual property and services) are not tackled by these partial goods only agreements. An important next step is to include NTMs and deep integration issues into India's agreements with Chile and Mercosur. Another is to initiate FTA negotiations with Mexico, which has become India's largest trading GSC partner in Latin America and currently is a member of NAFTA. Furthermore, industry bodies and export promotion agencies should regularly disseminate information on business opportunities and tariff concessions to the private sector.

5 Conclusions

This paper studied patterns of India-Latin America GSC trade and its links with national business environments and trade diplomacy. It finds evidence of a changing trade pattern between India and Latin America. Historically, the trade pattern was based on Indian final goods manufactures and IT services in exchange for Latin American commodities. Recently, this trade pattern has begun to deepen towards GSC trade—entailing sophisticated production sharing over geographical space—which could lay the foundations for a sustainable economic partnership between India and Latin America.

The data indicate that India-Latin America GSC trade has grown rapidly from a small base to about $8 billion in 2016. While a further increase is projected to 2025, risks associated with a new normal world economy and domestic policy in India may tilt the positive outlook to the downside. Furthermore, issues exist in the commodity and country composition of intra-regional GSC trade. The bulk of such trade is occurring in industrial supplies and there is limited capital goods trade. Furthermore, a few larger Latin American economies dominate the region's GSC trade with India. The Pacific Alliance is a rising player while Mercosur is on the decline and this difference seems to be linked to former's more open trade and investment regimes.

Analysis of national business environments and trade diplomacy helps to identify barriers to India-Latin America GSC trade. Import tariffs have fallen to historically low levels in both India and Latin America. FDI restrictions have reduced but remain problematic in India, Brazil and Mexico. Business start-up procedures can be streamlined more in India and some Latin American economies. Logistics efficiency is a key problem in several Latin American economies. Labour productivity in India and, to a lesser extent, in Latin America remains below more mature economies. After

conspicuous absence, trade diplomacy has picked up with increased contact between heads of state. This is gradually translating into expanded good trade coverage in the two limited inter-regional FTAs.

India-Latin America GSC is likely to remain a work in progress for some time. Further expansion can be supported by implementing domestic structural reforms aimed at barriers to FDI, business start-up, logistics and labour productivity. More focus in trade diplomacy on deepening FTAs and private sector engagement is also essential.

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Chapter 8
Benefits of Cooperating with Big Neighbors: The Case of Bangladesh and India

Sanjay Kathuria and Nadeem Rizwan

Abstract Bilateral cooperation between Bangladesh and India has been on the ascendant. On the economic front, Bangladesh–India trade has grown to become the largest bilateral trade relationship in South Asia. For Bangladesh, increased cooperation with India has resulted in economic gains through different channels including increased exports to India, inflow of Indian investment, and imports of electricity from neighboring Indian states. Further, mutual benefits could be realized through deepening cooperation. A Free Trade Agreement with India can unlock the trade potential of Bangladesh by improving its market access and providing cheaper and better-quality inputs for exporters. Bangladeshi firms could become key investors in the Northeastern region of India. Access to electricity generated in Nepal and Bhutan through India can open the opportunity for sub-regional energy trade and fulfill Bangladesh's rapidly growing demand for energy. Finally, expanding direct connectivity between India's Northeastern region and the rest of India via Bangladesh can generate positive spillover effects through increased trade, investment, and people to people contact.

[1]See the joint communiqué issued on the occasion of the visit of the Prime Minister of Bangladesh to India on January 12, 2010, and the joint statement issued on the occasion of the visit of the Prime Minister of India to Bangladesh on September 7, 2011.

[2]During the Indian Prime Minister's 2015 visit to Dhaka, 22 agreements and MoUs were signed, while another 22 were signed during the Bangladeshi Prime Minister's 2017 visit to India.

The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

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1 Introduction

Bangladesh shares a border of 4096 km with its large neighbor, India. Despite geographic proximity, strong cultural and linguistic ties, and shared history, the relations between the two countries have witnessed several high and low phases (Datta 2010; Pant 2007; Majumdar 2014). However, over the last few years, bilateral economic cooperation has improved significantly, and prospects seem bright. At reciprocal summit-level visits in 2010 and 2011, the two countries agreed, in principle, to cooperate on improving bilateral market access, physical connectivity, and power trade.[1] Bilateral cooperation continued and broadened during subsequent reciprocal summit visits: Indian Prime Minister Narendra Modi visited Bangladesh in June 2015, and Bangladeshi Prime Minister Sheikh Hasina visited India in April 2017. Several agreements and Memoranda of Understanding (MoUs) were signed on a wide range of issues related to trade, connectivity, power, investment, security, and cultural exchange.[2] The Land Boundary Agreement of 2015, enabling the transfer of 111 enclaves from India to Bangladesh, and 51 enclaves from Bangladesh to India, resolved a long-standing border dispute and has been described as "historic" and "…the most important bilateral initiative" (Banerjee et al. 2017). In addition, actions such as Bangladesh providing transshipment facilities to India to transfer goods from the rest of India to its northeastern states and India providing three lines of concessional credit to Bangladesh for infrastructure development, worth US$7.3 billion,[3] signified commitment to deeper cooperation and trust.

On the economic front, India–Bangladesh trade has grown rapidly in recent years: at a Compound Annual Growth Rate (CAGR) of 11.5% over 2011–15, faster than any country pair in South Asia except Bangladesh and Sri Lanka[4] (see Fig. 1). India–Bangladesh trade is currently the biggest bilateral trading relationship in South Asia in terms of value, standing at US$6.3 billion (Table 1).

Bangladesh holds an important position in India's "Neighborhood First" policy (Kashem and Islam 2016) and is key to implementing India's "Act East" policy (Maini 2015; Kathuria 2017) that seeks to better integrate the Indian economy with Southeast Asia. Greater economic cooperation between these two major economies of South Asia, covering 86.7% of GDP and 83.4% of the population of the region, bodes well for the growth and prosperity of both countries and that of the entire region.

However, the potential benefits of cooperation between two countries can often be missed when one country is disproportionately large. A size asymmetry can make the smaller country wary of the integration process (Kathuria and Shahid 2015). This note describes some of the benefits that have accrued to Bangladesh from deepening cooperation with India and outlines possible ways to further enhance these gains.

[3]The three lines of credit worth US$0.8 billion, US$2 billion, and US$4.5 billion were signed on 2010, 2016, and 2017, respectively.

[4]However, Bangladesh–Sri Lanka trade amounted to only US$0.1 billion in 2015, compared to India-Bangladesh trade of over US$6 billion.

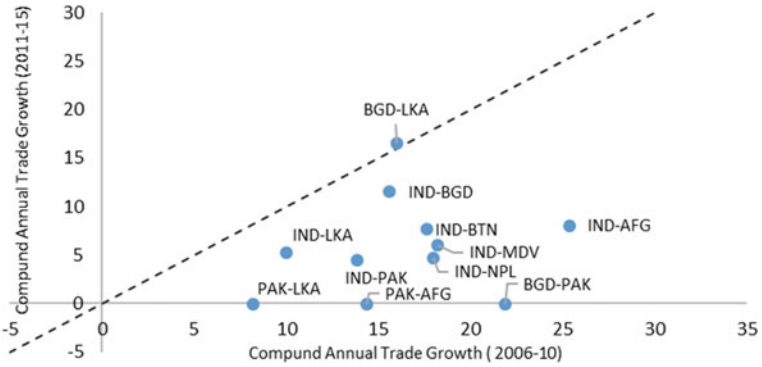

Fig. 1 Bilateral trade in South Asia. *Source* Author's calculation from UNComtrade data. *Note* Bilateral trade relationship of US$100 million or more are considered

Table 1 Top five bilateral trade relationships in South Asia in 2016

Trading countries	Trade (billion US$)
India–Bangladesh	6.3
India–Nepal	4.9
India–Sri Lanka	4.8
India–Pakistan	2.1
Pakistan–Afghanistan	1.7

Source Authors' calculation from UN Comtrade data through WITS

2 Benefits Through Trade

A nation's top trading partners contribute significantly to its economy by providing raw materials and intermediate goods for production, more varied and cheaper finished goods for domestic consumption, and a larger market for domestic production. Trade relations between Bangladesh and India have been gathering strength, growing from US$1.8 billion in 2005, to over $6 billion in 2016 (Fig. 2). India is currently the third largest trading partner of Bangladesh, behind China and the USA (Table 2). Bangladesh enjoys duty-free treatment for all its products (save 25 "sin" products such as alcohol and arms) from India since 2012 (Awais 2016), when India opened up its markets to least developed countries in the South Asia Free Trade Agreement (SAFTA) region. Apart from SAFTA, the two countries are members in several other Regional Trade Agreements, such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Asia-Pacific Trade Agreement (APTA). Largely arising from India's unilateral initiatives under SAFTA, Indian imports from Bangladesh have seen a significant rise—they almost doubled from US$358 million in 2010 to US$678 million in 2016, with a CAGR of 11.2%.

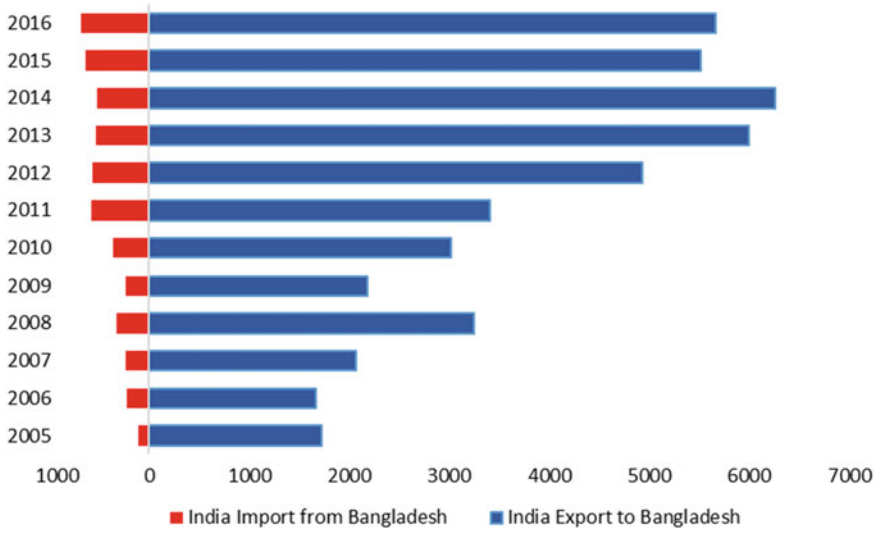

Fig. 2 India's trade with Bangladesh (Million US$). *Source* UNCOMTRADE through WITS

Table 2 Bangladesh's top five trading partners in FY16 (Million US$)

Country	Export	Import	Total trade
China	808	9669	10,477
USA	6221	1008	7228
India	690	5453	6143
Germany	4988	798	5786
UK	3810	277	4087

Source Authors compilation from Export Promotion Bureau and Bangladesh Bank

Despite the strong growth of Bangladeshi exports to India, they still comprise less than 1% of India's total imports. The story can be clearly observed through the trade intensity index (TII).[5] TII determines bilateral trade intensity and is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner. Bilateral trade is deemed "intense" and index value is more than 1 if they trade more with each other relative to the rest of the world.

[5]The trade intensity index (TII) is used to determine whether the value of trade between two countries is greater or smaller than expected on the basis of their importance in world trade. It is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner. It is calculated as:

$TII_{ij} = (x_{ij}/X_{it})/(x_{wj}/X_{wt})$

Where x_{ij} and x_{wj} are the values of country i's exports and world exports, respectively, to country j, and X_{it} and X_{wt} are country i's total exports and total world exports, respectively. An index of more (less) than 1 indicates a bilateral trade flow that is larger (smaller) than expected, given the partner country's importance in world trade.

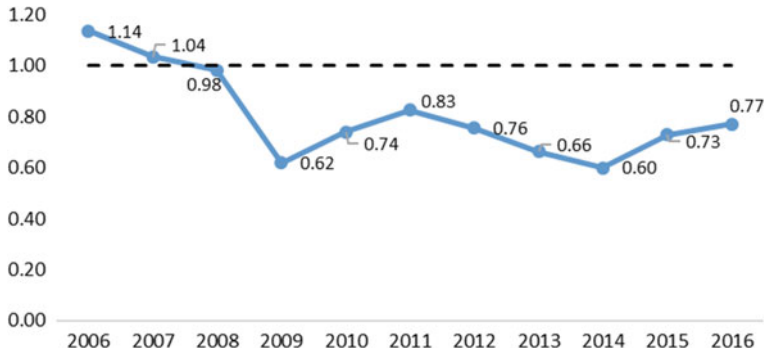

Fig. 3 Trade intensity index of Bangladesh's exports to India. *Source* WITS calculation based on UNComtrade

The decreasing TII for Bangladesh's exports to India and a consistent value of less than 1 (Fig. 3) since 2008 indicates that Bangladesh exports less "intensely" to India relative to the world, on average. This implies that Bangladesh is integrating with India at a slower rate than the rest of the world. However, this trend has reversed in 2015 and 2016, although the index is still some distance away from 1.

India's large market for imports (imports averaged almost $400 billion over 2014–16) represents a major source of potential gains for Bangladeshi exporters. For example, Indian imports that correspond to Bangladesh's top 50 global exports are more than US$3 billion (products disaggregated at four-digit level). However, Bangladesh captures only 12.1% share of the Indian market for those products, with exports of US$0.4 billion (Appendix). On the face of it, it seems that many product groups have the potential to expand market share in India and increase overall exports. Increasing exports to the dynamic and expanding Indian market will diversify Bangladesh's export markets and help cushion it from potential vulnerabilities in its traditional markets in the EU and the USA.

How can Bangladesh increase its exports to India? Some critical actions relate to addressing more general issues of competitiveness, such as reducing the anti-export bias in trade policy, attracting high-quality FDI, and improving regional connectivity and border trade procedures. In addition, Bangladesh could consider a bilateral Free Trade Agreement (FTA) with India. The experience of the India–Sri Lanka FTA shows that despite being the smaller partner, Sri Lanka gained substantially through export growth to India (Siriwardana and Yang 2007; Pitigala et al. 2016).

Several research papers outline the potential benefits of an FTA between India and Bangladesh. De and Bhattacharyay (2007) predict a stronger presence of Bangladeshi products in Indian markets arising from an India–Bangladesh FTA. De and Bhattacharyay (2007) also suggest that an FTA with India is the best way to address any non-tariff barriers that constrain bilateral trade—an approach that Sri Lanka is adopting as it considers a deeper trade agreement with India. Siriwardana and Yang (2007) estimate that an FTA with India could lead to an increase by 0.13 and 0.11% in Bangladesh's GDP, in the short and long run, respectively. They also project

Bangladesh's exports to the world to increase by 2.9% in the short run and 3.1% in the long run through growth in exports to India, including the products such as textiles and leather, processed food, and beverages and tobacco.

An FTA with India can also boost exports through indirect effects via imports. A major share of Indian imports serves as inputs into Bangladesh's export-oriented industries. For example, in FY16, 26.9% of Indian imports into Bangladesh comprised cotton, cotton yarn/thread, and cotton fabrics used in the ready-made garment industry. An FTA can benefit Bangladeshi firms by providing access to quality inputs, including intermediate goods and capital goods, at competitive prices, which can, in turn, enable them to better compete in export and domestic markets. De et al. (2012) show that Bangladesh's exports to India would grow by 182% in a scenario where a bilateral FTA existed, compared with the 134% growth in the case where only one-sided concessions were granted to Bangladesh by India, since Bangladeshi exporters would be able to access imported inputs more easily and at more competitive prices in the former case. In addition, the paper shows that a bilateral FTA accompanied by improved connectivity and trade facilitation can increase Bangladesh's export to India by 297%. Furthermore, the import of consumer goods can lower the prices of essential goods and provide consumers with more product variety and better quality. World Bank (2006) found that an FTA with India can bring substantial welfare gains to consumers in Bangladesh, if there is sufficient improvement in infrastructure and capacity development of customs at the border. CUTS (2014) estimated savings of US$207 million for consumers if Bangladesh imports some agro-based and manufacturing products, such as nutmeg, mace and cardamoms, coffee, wheat, polymers of ethylene, and insulated cable from India.

At the sub-national level, northeast India (NEI) can potentially be an important economic partner for Bangladesh as a source of inputs and a market for exports, given the geographic proximity. Due to NEI's geographic isolation from mainland India[6] and the resultant higher transportation costs of trading between the two, Bangladesh, with its long shared border with NEI, has a natural advantage as this region's trading partner (Rahman et al. 2011). Already, exports from Bangladesh to NEI include cement, synthetic fibers, garments, processed foods, plastic goods, and fish; imports to Bangladesh from NEI include resource-based products like coal, limestone, boulders, and agricultural products. However, the potential of NEI–Bangladesh trading relationship has barely begun to be tapped. For example, agricultural products from NEI can feed into Bangladesh's vibrant food processing industry, while NEI can provide a bigger market for its processed foods.

[6]This landlocked region, comprising eight states, is connected to the rest of India by a narrow land corridor, only 21 km wide, referred to as the Siliguri Corridor or Chicken's Neck.

3 Benefits Through Investment

FDI stock as a share of GDP is only 6.7% in Bangladesh, which is low relative to other comparable developing countries. Investment from a major economy like India can boost FDI inflows to Bangladesh, which in turn can contribute to boosting exports and creating jobs. Attracting Indian investment in sectors with export potential can help Bangladesh's export supply capability and increase its exports to India as well as the rest of the world (De et al. 2012; Pitigala et al. 2016). It may encourage other countries to invest in Bangladesh as well.

Share of Indian FDI in Bangladesh's overall FDI stock is quite low. However, both the share and absolute stock of FDI have been growing. Stock of FDI has more than doubled from US$127 million in 2010 to US$340 million in 2016, with the share increasing from 2 to 2.4% over the same period (Table 3). Till FY17, the major areas of investment for Indian investors were telecommunications, banking, and textile and clothing, accounting for 28.1, 20.2, and 14.9%, respectively, of total Indian investment stock (Fig. 4).

Indian investment in Bangladesh may continue its rising trend with the government showing interest in attracting investment from India. Recently, Bangladesh has earmarked land in Mirsarai (1005 acres), Bheramara (480 acres), and Mongla (200 acres) for special economic zones (SEZ) for Indian enterprises. However, improvement of overall investment climate in Bangladesh, including the availability of adequate power and infrastructure, and efficient trade facilitation, will be critical to realizing this opportunity. In this context, a bilateral FTA with India could act as a catalyst for additional FDI from India to Bangladesh. For example, the India–Sri Lanka FTA, which became effective in 2000, was accompanied by an expansion of Indian investment to Sri Lanka from 1.3% of total inward FDI in Sri Lanka in 1998 to 8.3% of total inward FDI in Sri Lanka in 2005 (De Mel 2010). In 2016, Indian FDI stock in Sri Lanka was US$1.2 billion which represented 12.7% of total FDI stock, just behind the Netherlands.[7]

Table 3 Indian FDI stock in Bangladesh (Million US$)

	FDI Stock	Percent of Total FDI
2010	127	2.0
2011	167	2.6
2012	219	2.7
2013	259	2.9
2014	289	3.0
2015	327	2.6
2016	340	2.4

Source Authors calculation from IMF CDIS survey data

[7] Authors' calculation from IMF Coordinated Direct Investment Survey Database.

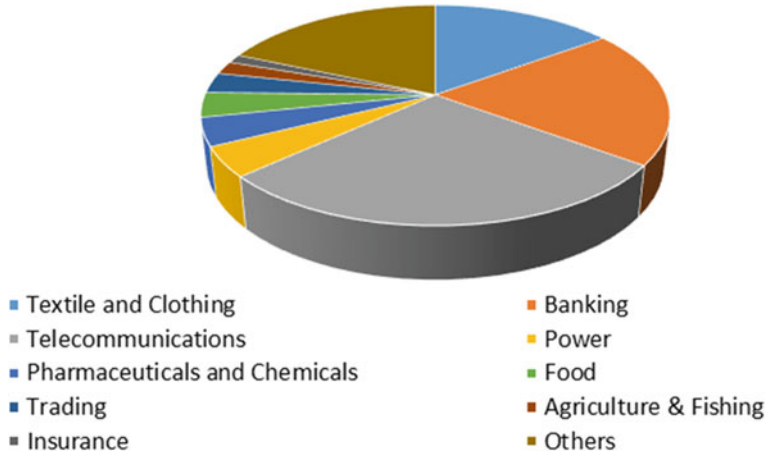

Fig. 4 Sectorwise investment stock of India (percent of total Indian investment stock). *Source* Authors' calculation from FDI Survey Report, January–June, 2017 by Bangladesh Bank

At the sub-national level, however, it is Bangladeshi companies which could become key investors in NEI—a process that so far has barely scratched the surface. For example, PRAN, a leading Bangladeshi food processing company, invested about US$14 million to set up an agro-processing facility in two acres of land allotted by the Tripura Industrial Development Cooperation (TIDC) in Bodhjungnagar Industrial Zone in Tripura (Rahman and Akhtar 2014). For Bangladeshi firms, NEI can be a testing ground to learn and grow before they expand to other more distant parts of the world (see Anas [2017] for an update on Bangladeshi companies seeking to invest overseas).

4 Benefits Through Energy Cooperation

Rapid economic development continues to increase the demand for consistent and reliable supply of power in Bangladesh. By 2021, the demand for electricity is forecasted to be approximately 20,000 MW.[8] Power generation is heavily reliant on natural gas (67.9%) and fossil fuels (20.5%) (Government of Bangladesh 2017). The over-dependence on natural gas poses a problem as the supply of natural gas has consistently fallen behind demand, on average by about 16.6% (about 433 mmsfd), creating a shortage of electricity. As per a 2016 official document, the demand for

[8]Ministry of Power, Energy and Mineral Resources, Government of Bangladesh. https://www.mpemr.gov.bd/power/details/80.

electricity outstrips supply by around 25% (roughly about 2500 MW).[9] The shortage of electricity has had a negative impact on the overall investment climate. The World Bank's Doing Business Report, 2020, has ranked Bangladesh 168 out of 190 countries in Ease of Doing Business, and 176 out of 190 countries on the "Getting Electricity" criteria.

Energy cooperation with India has somewhat eased the power supply shortage. Bangladesh is already receiving 660 MW through interconnections at Bheramara–Bahrampur (500 MW) and Tripura–South Comilla (160 MW) and will soon receive an additional 340 MW from the latter. In April 2017, it was agreed that Bangladesh would draw an additional 500 MW from India through the existing Bheramara–Bahrampur interconnection after a capacity expansion program, and that a power transmission line will be constructed from Assam to Bihar across Bangladesh, which will also allow the latter to import 1,000 MW of electricity (Government of Bangladesh 2017). Similarly, Bangladesh could be the "power corridor" for transmission of hydro-energy from Arunachal Pradesh to the rest of India and draw significant energy for its own needs in the process. In the future, this energy trade could well link up with potential hydropower exports from Bhutan and Nepal to form a BBIN power market. Deeper cooperation would also facilitate access to energy supplies through projects such as the natural gas pipeline linking Myanmar to India via Bangladesh.

5 Benefits Through Connectivity

More than 80% of trade between India and Bangladesh is carried out through the land route due to proximity, convenience, and cost-effectiveness (CUTS 2014). However, cargo trucks from either side cannot move beyond their border zones, which means that goods have to be trans-loaded at the border, adding to the cost of trading. Rail connectivity with India is weak and does not allow containers to cross borders by rail. Rahmatullah (2009) pointed out that a container can take 20–25 days, or more, to move from New Delhi to Dhaka, as the maritime route is via Mumbai and Singapore/Colombo to Chittagong Port, while there is an opportunity to transport it to Dhaka within 3–4 days with direct rail connectivity between New Delhi and Dhaka. Currently, there is no rail connection between Bangladesh and NEI, but plans are underway to connect the two through rail connections between Akhaura–Agartala and rail and road links between Chittagong–Sabroom, which would aid in meeting the trade potential between the two regions.

Better transport connectivity can have positive externality and spillover effects at all levels of the economy. Increased trade could generate additional revenues for the government in terms of import duties and port-related activities (Rahman et al. 2017). Given the location of NEI, connectivity provided by Bangladesh to facilitate movement of cargo between NEI and the rest of India could create opportunities for

[9]Power System Master Plan Summary, 2016, Power Division, Ministry of Power, Minerals and Energy Resources, Government of Bangladesh.

export of transport and logistics services for Bangladesh (Rahman et al. 2011). This would likely generate employment and investment opportunities along the transport corridor in other related sectors. In addition, improved connectivity would also help cross border movement of people, promoting people-to-people contact and building of mutual trust. The established rail link between Dhaka and Kolkata, the trial run of a passenger train between Khulna in Bangladesh and Kolkata in India, and direct bus services on Dhaka–Kolkata–Dhaka, Dhaka–Agartala–Dhaka, Dhaka–Shillong–Guwahati–Dhaka, and Kolkata–Dhaka–Agartala routes are some examples of such efforts.

India is improving connectivity in the sub-region around Bangladesh under its "Act East" policy—including the road network and rail links within NEI and between India and Bangladesh; the Trilateral Highway linking India to Thailand via Myanmar; and the Kaladan Multimodal Highway connecting India to Myanmar. In addition, the Bangladesh, India, and Nepal agreement on movement of motor vehicles is intended to facilitate movement of goods and people across borders. All of these will improve Bangladesh's access to NEI as well as to Nepal and Bhutan. Moreover, they will also open up additional possibilities of linking Bangladesh to Myanmar and ASEAN via Mizoram and Manipur in India. And, economic corridors linking India to ASEAN via Bangladesh have the potential to benefit all countries involved.

6 Conclusion

The potential of the Bangladesh–India economic relationship has just begun to be tapped. This note discussed the realized gains from this relationship and potential benefits to Bangladesh from enhancing cooperation with India. This note showed that improving bilateral cooperation with India can unlock the trade potential of Bangladesh and accelerate growth through better market access, investment, energy trade, and improved connectivity. Some critical steps to move this agenda forward would involve expanding direct connectivity between NEI and the rest of India via Bangladesh, giving Bangladesh similar access to Nepal and Bhutan via India, reducing the time and cost of trading across the two borders (which will require reducing perceived and real non-tariff barriers and promoting efficient customs procedures and border facilities), and encouraging Bangladeshi companies to invest in NEI and Indian companies to expand their presence in Bangladesh. Better investment and trade linkages can also deepen regional value chains and help Bangladesh access Asian markets.

Acknowledgments The authors are grateful to Priya Mathur for comments on an earlier version of the paper.

Appendix

See Table 4.

Table 4 Status of Bangladesh's top 50 global exports in Indian Market (2015)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
0306	Crustaceans, whether in shell or not		14.4	
0711	Vegetables provisionally preserved		2.3	
1905	Bread, pastry, cakes, biscuits and other bakers' ware	5.7	31.0	18.5
2009	Fruit juices and vegetable juices	0.0	33.3	0.1
2401	Unmanufactured tobacco; tobacco refuse	0.1	13.1	1.0
3004	Medicaments	0.1	845.4	0.0
4104	Leather of bovine or equine animals	14.4	461.5	3.1
4106	Goat or kid skin leather	0.1	14.2	0.5
4202	Trunks, suit-cases, vanity-cases, executive cases, brief-cases	4.4	277.3	1.6
4203	Articles of apparel and clothing accessories of leather or of composition leather	0.3	26.9	1.2
4205	Other articles of leather or of composition leather		18.2	

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
5303	Jute and other textile bast fib res	47.5	47.6	99.8
5307	Yarn of jute or of other textile bast fibres	58.9	59.0	99.9
5310	Woven fabrics of jute or of other textile bast fibres	22.6	35.2	64.2
5802	Terry towelling and similar woven terry fabrics		0.0	
6101	Men's or boys' overcoats, car-coats, capes, cloaks, anoraks, windcheaters, wind jackets and similar articles, knitted or crocheted	0.1	3.3	2.1
6102	Women's or girls' overcoats, car-coats, capes, cloaks, anoraks, windcheaters, wind jackets and similar articles, knitted or crocheted	0.1	1.4	6.4
6103	Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted	1.4	14.4	9.7

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
6104	Women's or girls' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted	1.9	24.0	8.0
6105	Men's or boys' shirts, knitted or crocheted	1.4	12.8	10.6
6106	Women's or girls' blouses, shirts and shirt-blouses. knitted or crocheted	0.4	10.8	3.9
6107	Men's or boys' underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar articles, knitted or crocheted	0.5	3.3	14.8
6108	Women's or girls' slips, petticoats, briefs, panties, nightdresses, pyjamas, bathrobes, dressing gowns and similar articles, knitted or crocheted	2.0	11.8	17.2

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
6109	T-shirts, singlet sand other vests, knitted or crocheted	14.3	44.5	32.1
6110	Jerseys, pullovers, cardigans, waist-coats and similar articles, knitted or crocheted	9.0	32.3	28.0
6111	Babies' garments and clothing accessories. Knitted or crocheted	1.4	16.1	8.4
6112	Track suits, ski suits and swimwear, knitted or crocheted	0.1	2.9	2.8
6201	Men's or boys' overcoats, car-coats, capes, cloaks, anoraks, windcheaters, wind jackets and similar article	0.2	9.2	2.3
6202	Women's or girls' overcoats, car-coats, capes, cloaks, anoraks, windcheaters, wind jackets and similar article	0.4	6.9	5.3
6203	Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)	57.9	111.9	51.7

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
6204	Women's or girls' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)	10.1	63.7	15.8
6205	Men's or boys' shirts	23.7	48.1	49.3
6206	Women's or girls' blouses, shirts and shirt-blouses	2.0	18.2	11.2
6207	Men's or boys' singlets and other vests, underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar articles	0.1	1.0	7.6
6208	Women's or girls' singlets and other vests slips, petticoats, briefs, panties, nightdresses, pyjamas, bathrobes, dressing gowns and similar articles	0.1	1.8	4.9
6209	Babies' garments and clothing accessories	0.9	6.7	13.0

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
6210	Garments, made up of fabrics of heading 56.02, 56.03, 59.03, 59.06 or 59.07	0.1	7.7	1.7
6211	Track suits, ski suits and swimwear; other garments	0.2	5.3	3.2
6212	BrassiSres, girdles, corsets, braces, suspenders, garters and similar articles and parts there of, whether or not knitted or crocheted	3.1	20.6	14.9
6217	Other made up clothing accessories; parts of garments or of clothing accessories, other than those of heading 62.12	0.2	5.1	3.6
6302	Bed linen, table linen, toilet line and kitchen linen	0.0	9.6	0.1
6305	Sacks and bags, of a kind used for the packing of goods	50.9	75.3	67.6
6306	Tarpaulins, awnings and sunblinds; tents; sails for boats, sailboards or landcraft, camping goods		3.5	

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
6310	Used or new rags, scrap twine, cordage, rope and cables and worn out articles of twine or of textile materials	13.7	75.0	18.3
6402	Other footwear with outer soles and uppers of rubber or plastics	0.3	150.8	0.2
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather	0.1	76.3	0.2
6404	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of textile materials	11.2	114.6	9.8
6505	Hats and other headgear, knitted or crocheted or made up from lace, felt or other textile fabric, whether or not lined or trimmed; hair-nets of any material, whether or not lined or trimmed	0.1	5.8	1.1

(continued)

Table 4 (continued)

Productcode (HS1996)	Product description	India import from Bangladesh (Million US$)	India import from world (Million US$)	Share of import from Bangladesh (%)
8459	Machine-tools for drilling, boring, milling, threading or tapping by removing metal, other than lathes of heading 84.58		133.4	
8712	Bicycles and other cycles (including delivery tricycles), not motorised	5.1	30.9	16.5
	Total	367.0	3038.4	12.1

Source Authors calculation from UNCOMTRADE via WITS

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Chapter 9
Making FTAs as an Effective Driver of Regional Integration: Sri Lankan Experience

Ravi Ratnayake

Abstract Based on the past experience relating to FTAs, with a special focus on Sri Lanka, the paper emphasizes the importance of good processes, policies, strategies, and institutional mechanisms for entering into such agreements. It presents a list of important steps, negotiation methodologies, and guidelines to be followed in the FTA negotiations. It shows that (a) careful analysis of costs and benefits of proposed FTAs based on research and data, (b) a well-crafted negotiation strategy, (c) putting in place domestic policies, regulations, and legal mechanisms, and (d) building supply-side capacity are required to benefit fully from FTAs. The lack of such good practices has been identified as a major reason for the failure of Sri Lanka to gain from such agreements. (Multilateral trade negotiations is the first-best mechanism to create market opportunities as the WTO promotes non-discriminatory, fair, and equitable international trading system. Such a process would simultaneously open Sri Lanka's and all its foreign markets, achieving the maximum benefits from trade, raising living standards and stimulating growth across the world. Though the GATT/WTO led multilateral negotiations produced remarkable results over the last six decades, they usually take a long time as the whole membership is involved in the decision-making process).

1 Introduction

Multilateral trade negotiations is the first-best mechanism to create market opportunities as the WTO promotes non-discriminatory, fair, and equitable international

[1]All items that were deemed sensitive by each country were categorized under the negative list excluding them from the tariff liberalization program.

[2]See various issues of Asia and Pacific Trade and Investment Report for patterns and changes of PTAs, their advantages and disadvantages.

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trading system. Such a process would simultaneously open Sri Lanka's and all its foreign markets, achieving the maximum benefits from trade, raising living standards and stimulating growth across the world. Though the GATT/WTO led multilateral negotiations produced remarkable results over the last six decades, they usually take a long time as the whole membership is involved in the decision-making process. An important alternative course, actively pursued by nearly all countries, is to engage in regional and bilateral trade agreements (RTAs and BTAs). Though they are negotiated in different forms such as free trade agreements (FTAs), Customs and Comprehensive Economic Partnership Agreements (CEPAs), when the extent of liberalization of trade is considered, almost all of these could be treated as preferential trade agreements (PTAs) as they are usually accompanied by a sensitive or negative list of different sizes.[1] These agreements have the advantage that they can be negotiated within a relatively shorter period of time because such deals take place among a few countries or between two countries. However, PTAs also have disadvantages such as high costs of negotiations and administration.[2]

As the Doha multilateral trade round is currently stalled, in a world of rising protectionism, countries increasingly depend on regional and bilateral trade agreements[3] as they do not have any other alternative for seeking market access. To date, 445 agreements have been notified to WTO while 279 are in force.[4] According to the databases of the World Bank and WTO, FTAs account for 50% of world trade. There are 260 trade agreements in the Asia-Pacific region, of which 87% are categorized as FTAs. In terms of value of trade, 33% of region's total world exports and 44% of region's total world imports were under FTAs during 2012–2014 with wide variation among countries. Most South-East and North-East countries (including Brunei, Myanmar, Lao PDR, Malaysia, Korea, and Singapore) have conducted over 70% of their trade under FTAs during the same period while some smaller countries such as Mongolia, Marshal Islands, and Micronesia reported the least shares followed by Maldives, Bangladesh, and Sri Lanka.[5] Though there is no theoretical link or even an empirically established relationship between economic growth and regional or bilateral agreements, one interesting observation is that the fast-growing South-East and North-East countries have entered into a higher number of FTAs than the latter group of less advanced developing countries.

While these numbers give some general support to the positive role of FTAs in expansion of trade and regional integration, Pangestu and Ing (2015) demonstrate that ASEAN + 1 and SAEAN + 6 FTAs have directly or indirectly contributed to successful regional integration and enriching economic development in Southeast Asia. The gains from FTAs could have been even greater if trade flows were not hampered by cumbersome rules of origin, SPS/TBT-related procedural barriers, lack of trade facilitation and logistics, and low awareness of concessions offered under FTAs.

[3] See Ratnayake (2011a, b) on various policy options for developing countries on trade-led growth.

[4] WTO RTA data map, 20 June 2017.

[5] Asia-Pacific Trade and Investment Report 2017, Un ESCAP.

In this context, this paper argues that if FTAs are properly negotiated and implemented together with an effective support system, which include trade facilitation measures, appropriate domestic reforms, and supply-side capacity building, FTAs could be made to deliver expected results. The paper (attempts to) examines the importance of good polices, processes, strategies, and institutional mechanisms for entering into FTAs based on past experience, in particular, from Sri Lanka. After an overview of Sri Lankan FTAs in Sect. 2, the paper moves to an analysis of basic requirements for entering into FTAs in Sect. 3, followed by a presentation on negotiation process in Sect. 4. The issues associated with trade in services are addressed in Sect. 5. The next three sections look at negotiation strategies, preparation of a sensitive list and institutional mechanisms required for negotiation of FTAs.

2 Sri Lankan FTAs

Sri Lanka is relatively less integrated with rest of the world with only two regional agreements (South Asia Free Trade Area—SAFTA) and (Asia-Pacific Trade Agreement—APTA), and two bilateral agreements with India and Pakistan compared with the Southeast Asian countries with an average number of eight PTAs per country.[6] Though SAFTA has a huge potential for trade among the South Asian countries, its implementation has been very slow due to various reasons including political tensions between some countries. One outcome of stalled negotiations was the emergence of increasing number of BTAs among member countries of SAARC led by India. The second RTA is APTA. Being a founding member country, Sri Lanka has been actively participating in APTA negotiations. At present, Sri Lanka receives preferential access to the Chinese and Korean markets only through APTA. Though APTA provides enormous market potential, Sri Lanka has not been able to benefit from it fully due to various reasons including the lack of awareness among exporters about APTA concessions.[7]

The Indo-Sri Lanka Free Trade Agreement (ISFTA) was the first bilateral free trading agreement of Sri Lanka, which came into force in 2002. The ISFTA adopted a *negative list approach* to trade liberalization between the two countries. Sri Lanka has 1180 items in the negative list while India maintains 429 (at HS 6 digit level) items in the list. In 2016, after analyzing the drawbacks of the ISFTA, including non-tariff barriers (NTBs) and the issues related to rules of origin, preventing Sri Lanka from benefiting fully from trade and investment, the new government proposed the Economic and Technological Cooperation Agreement (ETCA), to rectify the outstanding issues of ISFTA and deepen and widen trade between the two countries.[8]

[6] See Kelegama (1998) and Athukorala (2000) for early history of trade policy.

[7] See the Web page of UN ESCAP (Secretariat for APTA) for details of Sri Lankan commitments and concessions from other countries.

[8] It covers trade in goods, investment, economic and technology cooperation and trade facilitation, see Web page of Ministry of Development Strategies and International Trade, Colombo.

The second BTA was the Pakistan-Sri Lanka Free Trade Agreement (PSFTA) which was signed in 2005. Sri Lanka has 697 products in its negative list while Pakistan has 540 products in its negative list. In addition, the parties also agreed to have tariff quotas for selected products. The PSFTA has not been able to achieve its full potential due to the limited scope in terms of tariff margins as well as tariff lines and should be further expanded by deepening and widening the market access commitments. Recently, the two countries agreed to start negotiations to include services and investment in the PSFTA.[9]

In this context, it is imperative for Sri Lanka to be better connected with the world taking a more strategic approach in future trade agreements, while addressing shortcomings in existing FTAs. There are a number of compelling reasons why Sri Lanka should follow this path:

(a) Sri Lanka's recent trade performance has been far from satisfactory, marked by a decline as a share of the country's GDP as well as of world trade compared with the South-East countries.
(b) Sri Lanka has lagged behind in pursuing FTAs, especially compared with some countries in South and Southeast Asia, hence there is a need to catch up with the rest of the world. However, the policy decisions to enter into FTAs should be based on comprehensive analysis of costs and benefits but not on non-economic factors.
(c) Both developed and developing countries are using FTAs as a major trade policy strategy for their trade-led growth. Like or not, Sri Lanka has to be part of this global phenomenon without being isolated. FTAs are even more crucial for a trade-dependent small country like Sri Lanka to go beyond domestic market and to achieve economies of scale.
(d) In view of the changing dynamics of international trade, Sri Lanka should take advantage of the country's location and low-cost connectivity with the rest of Asia and establish a trade hub, a logistics hub, and a financial center which are intrinsically interconnected, well-negotiated FTAs could play a critical role.
(e) FTAs could play a vital role in attracting FDI and integrating the Sri Lankan economy with global value chains.

Realizing the importance of integrating further with the rest of the world, Sri Lanka started negotiating FTAs with the Asian countries including China, India, and Singapore and intends to build similar trading partnerships with some selected countries in the West. Sri Lanka's new policy direction to increase connectivity through FTAs is well justified not only in terms of its national objectives such as employment creation but also in view of growing popularity among both developed and developing countries to use such agreements as engines of growth and development. However, Sri Lanka should address the issues associated with the current FTAs (with) in parallel to its new FTAs agenda. For example, in the case of ISFTA:

(a) It is imperative to address implementing issues of ISFTA including non-tariff barriers related to testing, inspection, and certifying of Sri Lankan exports as

[9]When the President of Sri Lanka met the Prime Minister of Pakistan in January 2016.

well as issues of rules of origin and commencing as a parallel process along the negotiations on ETCA to remove quotas on major exports of Sri Lanka to India. While Mutual Recognition Agreements (MRAs) could play a powerful role in minimizing or eliminating NTBs, to be more effective, such MRAs have to be backed by strong institutional and compliance mechanisms on the side of Sri Lanka.

(b) Sri Lanka needs to make sure that the scope of the ETCA be adequately deepened, in particular, in terms of trade facilitation and widened to cove trade in services, investment, various aspects of technology cooperation, in addition to trade in goods. In respect of services, it is important to strategically select service sectors for liberalization keeping politically sensitive elements of Mode 4 of trade in services, in particular, movement of independent persons, outside ETCA until appropriate legal and regulatory structure are put in place. In this context, the "positive list" approach is preferred as it gives a substantial policy space to liberalize services gradually. However, such a preference should not prevent the government from entering into a "negative list" system under which a limited number of services are kept out of liberalization if it is beneficial to the country.

(c) In view of outstanding economic asymmetry between two countries, Sri Lanka should seek a special and differential treatment in terms of a larger negative list, favorable rules of origin and a longer period of phasing out of tariffs as was in the case of ISFTA.

(d) On the domestic side, it is important to educate and raise awareness of customs officials on concessions available under FTAs, facilitate testing, inspection and certification, create awareness of standards and regulatory requirements in importing countries including India among Sri Lankan exporters, and establish Help/Information Desks at borders that can address trade facilitation issues in a timely manner.

(e) In order to benefit from the market access opportunities of ETCA, Sri Lanka should produce what the Indian customers demand. It has been pointed out by Indian counterparts that Sri Lanka has utilized only around 50% of quotas given under ISFTA. While the size as well as certain conditions of quotas could easily be trade-restrictive leading to under-utilization, this could also be due to supply-side constraints in Sri Lanka, and hence, there is an urgent need to enhance supply-side capacity of Sri Lankan exporters.

3 The Basics for Signing FTAs

The low or slow performing two bilateral and two regional agreements that Sri Lanka is a member demonstrate clearly that just singing a FTA is not sufficient at all for a country to capture benefits from such pacts. FTAs create only market access to foreign markets. In order to gain from such opportunities, countries have to prepare

domestic economy with policy frameworks, legislative and regulatory structures, trade logistics/facilitation, and in particular, producing what is demanded by the other country. Moreover, a well-planned negotiation strategy with clear goals is also required.

(a) **Trade policy framework**

Properly designed trade policy framework is essential in order to place FTAs in the right context of a trade development strategy of a country and to make it be consistent with rest of development policies. Moreover, modern trade policy is much broader, deeper, and complex than what was some 40 years ago when unilateral liberalization dominated trade policy. Such a policy should take into account all aspects of trade such the WTO process, FTAs, global value chain, trade facilitation, and FDI as well as national development priorities, resources, and supply-side capacity. A well-crafted trade policy would ensure predictability, consistency, and transparency in both policies and regulatory structure. It would also enhance efficiency, competitiveness, institutional coherence, and social equality, and inclusiveness. In this context, Sri Lanka's New Trade Policy (NTP) is built on 4 pillars[10]:

Competitiveness through domestic policy reforms—entailing the rationalization of Sri Lanka's tariffs and para-tariffs and liberalization of the service sector while putting in place appropriate legal mechanisms, standards, regulations, and safeguards.

Market access and trade facilitation—opening of foreign markets for Sri Lanka's exporters through multilateral, regional, and bilateral trade agreements and comprehensive economic partnerships as well as faster customs procedures and improved logistics.

Macroeconomic balance, policy, and institutional coherence—macroeconomic policy, trade and investment nexus, trade and development linkages,[11] policies that contain the effect of trade liberalization on government revenues and on the trade balance, and streamlining and coordinating of institutions.

Adjustment of firms and people—measures designed to help Sri Lankan firms affected by international competition to provide a cushion the impact giving time for adjustment and policies that create equal opportunities for all in participating and benefiting from trade-inclusive trade.

(b) **Legal and regulatory structure**

The transition to a liberalized trading regime requires a supportive domestic regulatory structure. The goals are twofold: to facilitate an environment for liberalized trade and investment, while protecting the public from market abuse and providing a level playing field to domestic producers and service providers. For instance, the liberalization of trade in goods means more than eliminating tariffs for freer trade. It aims at making the domestic industry internationally competitive. The underlying

[10] Web page of MoDSIT. Sri Lanka.

[11] Trade has linkages with poverty, labour, environment, etc. See Berg and Krueger (2003), Hallaert (2006) and Ratnayake (2011a, b, 2013) for details.

regulatory framework plays a major role in this process. Laws that hinder private sector business activity should be eliminated and those that facilitate and encourage it, introduced. These include laws that impact the cost and efficiency of setting up businesses, access to capital, and doing business. Similarly, domestic reforms are required in the areas of legal and regulatory structures related to service liberalization and investment. For example, immigration laws as well as labor laws will have to be modernized and stringent monitoring and enforcement procedures will have to be introduced. Lacking such provision at present, the Sri Lankan legal and regulatory framework will require substantial attention to remedy these deficiencies. Finally, the existing laws that apply to investment will also have to be reviewed. On the face of it, the regulatory framework appears inefficient and outdated. It is also a fact that mere liberalization of the investment regime will not facilitate investments. Any real increase in investment will depend on the stability and predictability of the country's overall legal regime and the business climate.

(c) **Standards, regulations and Mutual Recognition Agreements (MRAs)**

Standards and regulations are required to protect consumers, the environment, animals, and plants. In order to achieve this objective, the conformity assessment procedures including inspecting, testing, and certifying are carried out for both imports and exports locally or overseas before entering into a foreign market. While these measures are essential for safeguarding the consumers and the health of people, animals, and plants, such measures could be used as non-tariffs barriers (NTBs) on trade as explained above. An effective standards system is particularly required to address importation of substandard goods under FTAs.[12]

In Sri Lanka, at present measuring, standardizing, assessing, and certifying of products and services are carried out in a fragmented manner by different institutions coming under the purview of different ministries. The current system not only leads to the duplication of work with more than one institution responsible for the same task but also (paves) results in higher costs of products because of multiple inspections and tests where at the end of the day the consumer has to suffer. Coordination of all the work related to sanitary and phytosanitary measures (SPS) and technical barriers to trade (TBT) by one national-level institutions is even more important in facilitating exports at a time the government has accorded high priority to FTAs.

Beyond the border, currently, Sri Lankan exporters face numerous NTBs in relation to SPS and TBT issues in foreign countries such as India. The MRAs are considered as a powerful instrument to address the SPS- and TBT-related compliance issues by Sri Lankan exporters in foreign markets such as lengthy inspection and testing procedures, delays in releasing goods, warehouse shortages.[13]

(d) **Intellectual Property Rights (IPRs and TRIPS)**

The current IPRs in Sri Lanka including rights, their acquisitions, management, and enforcement, are governed by the Intellectual Property Act no 36 of 2003. Sri Lanka,

[12]Department of Commerce recently compiled a list of 61 imported substandard products.

[13]Verite Research, Improving Trade with India.

though follows international standards related to IPRs, much need to be done: (a) strengthening enforcement of existing laws, (b) introduc(e)ing more product-specific IPR laws, (c) encourag(e)ing the business sector and inventors of new technologies to patent such inventions in time, (d) acceleration of the accession to the Madrid Protocol of registering international trademarks (should be accelerated as was proposed by the last budget). It reduces time and cost taken to register trademarks in foreign markets and is important in the drive to move Sri Lankan exports from selling generic products, or manufacturing for foreign brands to developing its own brands, (e) us(e)ing the IPR laws and their effective enforcement as a powerful factor to attract more FDI and to further develop the domestic business sector, and (f) (a comprehensive) training and capacity building program to educate both government officials and business sector of the importance of IPRs for economic development, in particular, investment, innovation, and new technologies.

4 Strengthening Trade and Investment Nexus

Trade and foreign investment are closely interconnected. More foreign investment often means more exports. Foreign investment augments domestic capital for all uses, including for exports and trade infrastructure, transfers management know-how and technology, introduces new products for exports, increases productivity, and enhances capacity to penetrate markets abroad. Foreign investment also tends to galvanize domestic investment in upstream and downstream activities.

The linkages between foreign investment and trade have become more important in recent years as Global Production Sharing (GPS), the division across countries of "tasks" within the same production cycle has spread. High-tech and capital-intensive industries rely heavily on GPS networks. MNEs often move investments to low-cost locations to export back to their own countries and to third countries. Foreign direct investment can also play a crucial role in boosting the efficiency of the domestic services sector, which, in turn, helps exporters. An efficient services sector requires adequate (not overly intrusive) government regulation as well as a high degree of competition among domestic suppliers. But, in the export arena, this is usually not enough. To spur competition, access expertise, and boost exports of manufactures as well as services, foreign direct investment in services is often needed.

5 Trade Negotiation Process

While there is no standard procedure for entering into FTAs, based on successful past experience of countries in the region, any proper negotiation process should follow the following steps:

- Step 1: Identification of national objectives related to trade;

- Step 2: Identification of comparative advantage and foreign demand;
- Step 3: Undertaking of a cost-benefit analysis of the proposed FTA;
- Step 4: Consultation and coordination with relevant government agencies;
- Step 5: Public consultation;
- Step 6: Setting up of negotiation strategy and committees;
- Step 7: Implementation of a trade-cost adjustment program;
- Development of programs to build supply capacity of exporters.

Identification of national objectives related to trade: FTAs are signed to achieve particular national objectives. In the case of Sri Lanka, the government decided to embark upon export and FDI-led development and hence, FTAs should be negotiated to achieve the same.

Identification of comparative advantage and foreign demand: Though FTAs are for facilitating both exports and imports, unless Sri Lanka is producing what is demanded by consumers of a partner country, gains in terms of exports will not be maximized. Various techniques such as revealed comparative advantage (RCAs) can be used to identify products in which Sri Lanka has comparative advantage vis-à-vis a foreign trade partner.

In this regard, Sri Lanka should prepare (a) defensive or offer list and (b) offensive (request list). The defensive list consists of items (both goods and services) which Sri Lanka is willing to offer to a particular partner. Such a list is prepared by taking into account factors including Sri Lanka's national priorities with regard to the development of local industry, impact on employment and consumer interests. The offensive list consists of items (both goods and services) that Sri Lanka has existing capacity or future potential (comparative advantage) to export to a partner country. Such a list is prepared taking into account factors including export interests of the domestic business sector and the strategic industry interests of the country. In this regard, empirical research based on an analysis of trade flows including the indices of trade performance is quite useful to identify Sri Lanka's export potential in a partner country.

Undertaking a cost-benefit analysis: A crucial stage of entering into an FTA is undertaking a cost-benefit analysis which should be made mandatory unless the net benefits of a potential FTA are known in advance. The potential benefits from an FTA include greater market access for Sri Lankan companies, increased domestic competition, more FDI, more employment and increased welfare while the costs include trade diversion and trade adjustment costs. Both qualitative methods and quantitative techniques such as econometric techniques and computable general equilibrium models such as GTAP can be used to estimate costs and benefits of FTAs.

Consultation and coordination with relevant government agencies: As trade is closely linked with other subject areas including investment, customs procedures, and processes, logistics, regulatory mechanisms and standards, an institutional mechanism for interagency consultation should be established to take the negotiation process forward without creating any contradictions in the public policies and maximizing the benefits while minimizing costs associated with FTAs.

Public consultation: As FTAs are signed for the benefit of the public at large, various stakeholders including the business sector and professional associations should be given an opportunity to provide inputs to the process of negotiations. Particularly, the views of the business sector on various parts of any FTA are vital given that it is the companies who are engaged in trade, investment, and business, but not the public institutions. Their inputs are also important to identify various constraints that they face when they enter into foreign markets.

Finally, supply-side capacity: is critically important for any country to capture benefits of market access generated through trade deals at bilateral, regional, and global levels. The under-utilization of the quotas offered under the ISLFTA (at least partially), the high dependence on unprocessed primary products, low volume of trade in services, and lack of product diversification of exports are some reflections of such capacity constraints to produce and export goods and services demanded in overseas markets. The supply capacity of exporters can be enhanced through various channels including the development of SMEs, skill development, provision of trade-related infrastructure such as ICT facilities, innovative export financing, and market and product information and creation of new industries, products, and services.

Though the timing and sequencing of trade negotiations are critically important as presented above, one should not forget about ground realities in following such an "ideal process." Hence, there is a need for some flexibility.

6 Negotiating Trade in Services

Trade in services deserves a special consideration in the negotiation process as the service liberalization could have significant implications on various sectors of the economy including production, investment, and labor market though the commitment process under GATS is characterized by a high degree of discretion and flexibility. Members make Market Access and National Treatment commitments in each of the four modes of supply. These commitments are made in sectors which members are willing to propose for negotiations. Hence, if there are sensitivities and domestic compulsions, which make it difficult for a country to offer a sector for negotiations, then that country is not obliged to schedule commitments in that sector.[14]

Sri Lanka opened up many of its services including finance and banking, insurance, tourism, and telecommunications unilaterally when it liberalized its economy in 1977. Thereafter, a gradual opening of these sectors took place as the liberal economy got more opened to foreign competition until about the mid-2000s. Sri Lanka's multilateral liberalization efforts in services commenced in 2000 after the GATS came into operation under the WTO. Sri Lanka made its commitments under the WTO GATS in Telecommunication, Financial Services and Banking, and Tourism. Sri Lanka made lower commitments in GATS compared to the extent of unilateral liberalization that has been undertaken. This allowed a greater deal of policy space

[14] A series of papers by late Dr. Saman Kelegama gives various issues related FTAs and ETCA.

for the government to shift within the committed level of liberalization and the unilaterally provided level. Sri Lanka has also submitted its request list to 18 countries in the GATS.[15]

Sri Lanka made a concerted decision to expose its services sector for more international trading in 2002. For this purpose, the option that was selected was GATS Article V, where countries could engage in services liberalization under a GATS-Plus framework in bilateral or regional trading agreements. This decision was taken due to three reasons:

(a) Services were the largest sector in Sri Lanka's GDP amounting to 58% but its trading capacity was relatively low compared to its size;
(b) Sri Lanka's strategic location that gave it a comparative advantage of being a services hub for some areas of services remaining not fully utilized; and
(c) WTO Trade in Services liberalization agenda under GATS coming to a standstill and most countries engaging in services liberalization bilaterally or regionally, and Sri Lanka lagging behind.

Sri Lanka made a number of attempts to engage in GATS Article V services trade liberalization since 2008 with the now abandoned India–Sri Lanka Comprehensive Economic Partnership Agreement (CEPA) and SAARC Trade in Services (SATIS) Agreement. SATIS came into operation in 2010 and Sri Lanka has already made its "offers" and "requests" to the liberalization program. SATIS liberalization is an ongoing process which is progressing slowly. The most recent move was seen when the India–Sri Lanka Economic and Technology Cooperation (ETCA) was mooted in September 2015. Here again, the asymmetry between the two countries will be accommodated in the regulatory framework governing the agreement as was the case earlier under CEPA. Sri Lanka has kept Mode 4 liberalization unbound in both its multilateral liberalization under WTO and regional liberalization under SATIS so far.

As trade in goods is closely linked to services and investment and "servicification" of manufacturing exports has increased over the years, there is a need to have a fresh look at the trade in services, not only for exports of services but also for the improvement of competitiveness of manufactured products.

Objectives of service liberalization

(a) To increase efficiency of the domestic service sector leading to greater competitiveness of agricultural and manufacturing sectors in both domestic market and international markets,
(b) To enhance trade in services in which Sri Lanka has comparative advantage,
(c) To increase competition among providers of services leading to higher quality and lower domestic prices for consumers,
(d) To encourage more FDI as an efficient service sector is a major attraction for MNEs to locate their investments,
(e) To benefit better from global production sharing or value chain.

[15] Visit Web page of Department of Commerce, Sri Lanka or the WTO Web page for details of these countries.

Policy directions for liberalization of services

(i) After conducting proper cost-benefit analysis, Sri Lanka should seriously consider liberalization of services and reap benefits for the overall growth and development.
(ii) In order to maximize benefits from services liberalization under the GATS framework, Sri Lanka needs to strengthen its regulatory and legal structure to ensure that the liberal services regime operates with the necessary checks and balances.
(iii) While keeping Mode 4 unbound until such time the country is equipped with necessary regulatory mechanisms to protect domestic interests, Sri Lanka should consider liberalizing the remaining three modes if they are beneficial to the country.
(iv) There is no reason for Sri Lanka to have the same commitments in trade in services for FTAs with all FTA partners. The scope of liberalization of services (i.e., which modes to be liberalized) depends on (a) potential opportunities in trade in services for Sri Lanka in the partner country, (b) the relative ability of the Sri Lanka service sectors (i.e., degree of competitiveness) to compete with the concerned trading partner in the domestic market, and (c) the availability of regulatory mechanisms. Though there are some general principles and criteria for liberalization of services applying to all FTAs, Sri Lanka should strategically treat each FTA as a "differentiated product."
(v) As there are significant gaps in the legal and regulatory structure, the government has to take a cautious approach to liberalizing services. In this context, the "positive list" approach is preferred as it gives a substantial policy space to liberalize services gradually. However, such a preference should not prevent the government from entering into a "negative list" system under which a limited number of services are kept out of liberalization if it is beneficial to the country as mentioned above. Whether to choose a negative list or positive list approach once again depends on the factors mentioned under (vi).
(vi) The process of service liberalization should follow the same steps as with goods given above.

7 Negotiation Strategy

In order to maximize the benefits from FTAs, it is crucial to put in place a proper negotiation strategy before the beginning of any negotiation process (Step 6). Such a strategy should:

(i) Take into account various objectives and principles described above, in particular, Sri Lanka's traditional comparative advantage and the need to develop new industries in line with global developments including global value chain.

(ii) Identify market access opportunities in the partner country enabling local companies to develop new products to meet foreign demand.
(iii) Identify non-tariff barriers in the partner country and address them at the negotiations.
(iv) Develop mutual Recognition Agreements (MRAs) to reduce or remove technical barriers, regulations, and standards on trade.
(v) Pay particular attention to rules of origin as they can become formidable barriers to trade.
(vi) Identify alternative negotiations options for sensitive issues including a sensitive list. Some balancing may be required among degree of reciprocity, duration of liberalization (i.e., 10 years), coverage (i.e., 30% sensitive list), and modality (i.e., time schedule of reducing the sensitive list) in preparing tariff liberalization program (TLP).
(vii) Focus on all sectors of agreement (trade in goods, services, and investment in the case of CEPA) in finding negotiation solutions to maximize benefits from such deals.
(viii) Prepare negotiation teams by equipping them with training, information, and negotiations strategy.
(ix) Capitalize Sri Lanka's small country status through on the basis of "large and small country" or asymmetry, given that Sri Lanka currently is entering into FTAs with large countries such as India and China. Such a favorable treatment may not be contradicting any WTO principle as it involves a larger country granting a special treatment to its small trading partner. However, it should be noted clearly that this type of special treatment could be materialized largely through a well-crafted political process involving political leadership along with negotiations at a technical level.

8 Sensitive or Negative List

Preparation of a negative list is a critical task of the tariff liberalization program (TLP) under any FTA. In the case of Sri Lanka, the negative list is prepared using an objective criteria taking into account the need for the development of agriculture development and strategic industries, revenue implications, consumer interests, Sri Lanka's comparative advantage, future trade potential, production sharing networks, and the trade-investment nexus. The size of the negative list under each FTA will be determined on the basis of the degree of reciprocity, the extent of benefits, costs and benefits from other areas of cooperation (e.g., from services, investment) and the phasing out period of the list.

The following criteria/objectives will be considered in developing a negative list for Sri Lanka:

(i) **Agricultural development**

Given the importance of agriculture, it is imperative for the government to accord due consideration to the agriculture sector in the review of the negative list. While there is an urgent need to improve productivity, the sector requires adequate protection in the short term in view of its contribution to GDP, food, employment, and poverty reduction. In the long run, the sector should improve its competitiveness in both domestic and international markets and gradually reduce its dependence on government assistance.

(ii) **Promotion of strategic industries**

In line with the export and FDI-led development model of the government,[16] the New Trade Policy (NTP) emphasizes the importance of promotion of certain strategic industries with time-bound and result-oriented assistance. These include (a) priority sectors selected under the National Export Strategy (NES),[17] (b) priority FDI sectors,[18] (c) transforming of efficient import-competing industries into export-orientation, and (d) promotion of global production sharing networks which requires a liberal trade regime with low-cost imported inputs.

(iii) **Revenue considerations**

Sri Lanka is a trade-tax dependent country. To fund rising government spending, Sri Lanka has relied increasingly on trade taxes at the border which are relatively easy to levy. Currently, the highest trade tax items are included in the negative list which requires careful review taking into account the implications of any revision of the negative list on revenue. In the long run, the government needs to work toward increasing the tax productivity in the country by increasing its direct tax revenue.

(iv) **Sri Lanka's comparative advantage and future trade potential**

The existing negative list has been prepared based mainly on the industry concerns or the interests for the protection of local industries without giving adequate attention to the efficiency of those or the Sri Lanka's comparative advantage. Similarly, the future trade potential of the items in the negative list should also be considered.

(v) **Consumer interests**

Usually, the products included in a negative list under any FTA receive the highest protection from import competition. While the domestic industries benefit, consumers are adversely affected by increased local prices resulting from such protection. Therefore, there is a need to maintain an appropriate balance between industry interests and consumer welfare.

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[16] Economic Statements of the Prime Minister, 2015 and 2016 at the Parliament.

[17] Prepared by the Export Development Board of Sri Lanka.

[18] BOI has selected a list of sectors for promotion based on a comprehensive study carried out with the support of Harvard University.

The negative list should maintain an appropriate balance among the core objectives of the tariff liberalization program mentioned above. The methodology could use various filters for each of these criteria as given in Table 1.

Table 1 Methodology for the review

Criteria	Filter	Indicators	Negative list	Remarks
Agricultural development	1. Goods produced locally 2. Livelihood 3. Food security	1. 50% or more produced locally 2. Substantial employment 3. Gaps in food supply	Include	Data on production, consumption, employment and imports from Dept. of Statistics and Customs
Strategic export sectors and FDI sectors	Lists of strategic sectors	Included in the list of sectors for export and FDI promotion	Include	Lists from EDB and BOI
FDI sectors	List from BOI		Include	BOI
Efficient IS sectors	List of efficient IS sectors	Higher level of efficiency based on RCA, and value-added estimates	Include	List from Ministry of Industries
PSNs	List of PSN sectors	High potential for PSN	Exclude	
Revenue	Share of revenue	Substantial. contribution by border taxes	Include	Ministry of Finance –Reducing dependency on trade taxes
C/Advantage	RCA estimates	High (. >*X*)	Include	EDB
Trade potential	Estimates	High (>*X*)	Include	EDB
Consumer impact	Prices	High	Exclude	MoDSIT

Note X denotes a value of RCA determined by the negotiating committee as a cutoff point to eliminate products from the negative list

Use the following steps to finalize the negative list

[a]Set various objectives in terms of their importance to the economy

[b]Two approaches can be used for the filtering process (i) start from the most important objective and use the respective criteria to decide whether the concerned sector should be included in the negative list, (ii) identify products which satisfy the highest number of criteria

[c]If (i) is selected, follow the same process for other core objectives as per [a]

[d]The negotiation team will have some flexibility for adjustments depending on the nature of negotiations

9 Trade-Cost Adjustment Program

Trade reforms have long-term benefits including higher economic growth through the efficient allocation of resources and increased competitiveness. They also have short-term disadvantages in terms of loss of outputs and employment in import-competing sectors and potentially the loss of government revenue. These costs are expected to be minimized or eliminated in the long run as displaced labor shifts to higher-productivity jobs and higher rates of formal employment, including in export-oriented sectors, and in the shorter run as tax revenue is increased from higher imports. However, it is important to develop a trade-cost adjustment program to address any short-term potential negative impacts of liberalization. These include government-sponsored training and capacity-building activities to help boost competitiveness of firms and trade-cost adjustment compensatory (i.e., financial) programs for local firms, in particular, SMEs.

10 Institutional Mechanism for Trade Negotiations

In order to perform trade negotiations expeditiously and in a timely manner, a transparent and well-structured mechanism is required. Such a mechanism should not be changed in the short to medium term to avoid any confusion among those involved in trade negotiations and to make institutions accountable for their performance. However, there should also be some degree of flexibility to make necessary adjustments in the process taking into account changing circumstances nationally or internationally.

11 Conclusion

Entering into a FTA is a complicated process which needs careful analysis of costs and benefits based on research and data, a well-crafted negotiation strategy, putting in place appropriate domestic policies, regulatory and legal structures, and building supply-side capacity of domestic producers to benefit fully from such agreements. The absence of appropriate domestic preparations could lead to low performance of FTAs as evidenced from the Sri Lankan experience.

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Chapter 10
Supporting Sri Lanka's Free Trade Agreements

Rashmi Banga

1 Introduction

Sri Lanka has signed and is in the process of signing many bilateral and regional free trade agreements (FTAs) with a primary focus on maximising the economic benefits and welfare of its people. As of December 2016, Sri Lanka has eight FTAs of which four FTAs are into effect (Asia-Pacific FTAs, India-Sri Lanka FTAs, Pakistan-Sri Lanka FTAs and South Asian FTAs) and four FTAs are being negotiated (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), Singapore-Sri Lanka Comprehensive Economic Partnership Agreement (CEPA), Economic and Technology Cooperation Agreement (ETCA) with India and China-Sri Lanka FTA). In order to provide support to the ongoing negotiations, the present study primarily focuses on Sri Lanka's offensive and defensive interests in trade in goods and services with respect to China, India and Singapore.

Table 1 reports Sri Lanka's trade relations with China, India and Singapore. In 2015, Sri Lanka's total trade with these countries accounted for 34% of Sri Lanka's global trade. However, their share in Sri Lanka's global exports was around 10% but share in global imports was around 47%. This justifies the reason for Sri Lanka to enter into FTAs with these countries as the FTAs will enable Sri Lanka to procure its imports cheaply from these countries and also provide opportunity to Sri Lanka to boost its exports into these countries, aiming at a favourable balance of trade.

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Table 1 Sri Lanka's existing trade with world, China, India and Singapore (in USD million): 2015

	World	China	India	Singapore	China (%)	India (%)	Singapore (%)	Total of three countries (%)
Exports	10,440	305	710	85	2.9	6.8	0.8	10.5
Imports	18,967	3,727	4,268	923	19.7	22.5	4.9	47.1
Total trade	29,407	4,032	4,979	1,008	13.7	16.9	3.4	34

Source World Integrated Trade Solutions (WITS), COMTRADE

2 Sri Lanka's Offensive and Defensive Interests in FTAs

2.1 Sri Lanka's Tariff Structure

Sri Lanka has gradually reduced its tariffs vis-à-vis the world since 2000. Its average tariffs imposed for the world declined from 9.5% in 2000 to 8.1% in 2014. Similarly, the tariffs faced by Sri Lanka globally have also declined over time, declining from 12.2% in 2000 to 8.6% in 2014 (Table 2). With respect to China, India and Singapore, Sri Lanka faces higher average tariffs as compared to the tariffs imposed by it on these countries, except for Singapore, where tariffs are zero.

2.2 FTA Assessment: Methodology

In order to identify Sri Lanka's offensive and defensive interests in the negotiated FTAs, two methodologies are used. First, SMART simulations which identify likely changes in exports and imports of Sri Lanka post-FTAs, and New Product New Market Analysis for Sri Lanka, which identifies Sri Lanka's competitive products in these three markets as well as the potential market share which Sri Lanka can get in these markets from its weak competitors.

Table 2 Tariffs imposed by Sri Lanka while importing from its partners (on all products)

Countries	Tariff imposed			Tariff faced		
	2000	2010	2014	2000	2010	2014
China	9.4	9.6	8.0	20.0	11.4	10.5
India	9.1	9.4	7.8	31.9	11.4	11.6*
Singapore	9.9	10.6	8.5	0.0	0.0	0.0
All countries	9.5	9.8	8.1	12.2	10.7	8.6

Source Wits database, World Bank, *tariff for the year 2013

Box 1 Methodology: Impact of tariff liberalisation and identification of new products for exports In order to estimate the rise in imports and exports that may occur if the two countries brought their tariffs down to zero, we use a World Integrated Trade Solution (WITS) simulation model—namely specific, measurable, assignable, realistic and time-related (SMART)—estimations. This model estimates the impact of tariff liberalisation (zero tariffs) on the trade of two bilateral trading partners. The model undertakes the estimations and impact at HS six-digit product disaggregation. Such a disaggregated product-level estimation of tariff liberalisation is not possible in any other model. The model not only estimates the extent of imports that may arise from the tariff cuts of members, but is also able to provide results at the product level on trade diversion, recognising from which country the imports of products would be diverted.

To identify 'new products' which Sri Lanka can export to China, India and Singapore, a competitiveness analysis is undertaken between products which Sri Lanka can export to these countries vis-à-vis the existing exporters of those products to these countries. The selection is made from a list of products which Sri Lanka is exporting to the world but its exports are minuscule to these countries, although these products are being globally imported by the partner countries. Only those products are identified where Sri Lanka is found to be more competitive than its competitors in the identified markets, and accordingly, the potential market share which Sri Lanka can get from its competitors in the partner country is estimated.

To estimate the competitiveness of Sri Lanka compared to its competitors in the China, India and Singapore markets, four indices have been used: revealed comparative advantage (RCA); contribution to trade balance (CTB); position in the international market (POS); and unit cost analysis. The literature generally uses bilateral RCA to compare the comparative advantage of a country with that of other countries. However, RCA calculations use only export data and ignore import content into exports, i.e. the extent that imported inputs have been used to produce the exported product. To overcome this limitation, we use bilateral RCA in conjunction with CTB and POS. The CTB index is based on imports of the product, as well as the exports. If a product adds to the trade balance positively, it is identified. This index helps to exclude those products which are mainly traded—i.e. imported and then exported with little value addition.

The CEPII (Centre d'Etudes Prospectives et d'Informations Internationales) has developed an analytical indicator of comparative advantage based on the trade balance instead of relative export structures. A country j would have comparative advantage in product i if the CTB is positive; this means that product i is a strong point of country j, as it contributes positively to the overall balance.

The contribution of product k to the trade balance, in relation to total trade flows (X = exports and M = imports), is defined by:

$$\text{CTB} = f_{ik} = y_{ik} - g_{ik} \times y_i$$

where

$$y_i = 1000 \times \frac{X_i - M_i}{X_i + M_i}$$

$$g_{ik} = \frac{X_{ik} + M_{ik}}{X_i + M_i}$$

the POS of country i in product k measures its international competitiveness. If POS > 0, the product is competitive in the international market and vice versa. POS is calculated as follows:

$$\text{POS}_{ik} = 1000 \times \frac{X_{ik} - M_{ik}}{X_{kw} + M_{kw}}$$

3 Results of Tariff Simulations

Box 1 reports the methodologies used by the study, which are SMART simulations and competitiveness analyses to identify new products. Using the reported methodology, the next reports the results.

3.1 Aggregate Results

For estimating the likely changes in exports and imports of Sri Lanka vis-à-vis its partners in the negotiated FTAs, the SMART simulations are undertaken to bring all tariffs down to zero. This approach also helps in identifying the 'sensitive list' for the country vis-à-vis its partner in FTAs. The broad results with respect to each country are reported in Table 3. The results show that post-FTA, Sri Lanka's imports will increase by 9%, i.e. $345 million from China; 9%, i.e. $407 million from India; and around 21%, i.e. $192 million from Singapore. Most of the changes in Sri Lanka's imports will be of new imports (i.e. trade creation) with only around 30–35% being diverted from other countries (trade diversion).

Table 3 Sri Lanka's rise in total imports post-FTA (Sri Lanka import duty zero)

Rise in Sri Lanka's imports from	Before (US$ million)	After (US$ million)	Total changes (US$ million)	Trade creation (%)	Trade diversion (%)	Percentage change (%)
China	3,727	4,072	345	65	34	9
India	4,268	4,676	407	71	29	9
Singapore	923	1,114	192	71	29	21

Source Based on Author's estimations using SMART simulations

Table 4 Sri Lanka's rise in total exports during post-FTA (import duty of partner zero)—in US$ million (projected for 2015)

Rise in Sri Lanka's exports	Before (US$ million)	After (US$ million)	Total changes (US$ million)	Trade creation (%)	Trade diversion (%)	Percentage change (%)
China	305	399	94	70	30	31
India	710	1,234	524	77	23	74
Singapore	85	85	0	–	–	0

Source Based on Author's estimations using SMART simulations

With respect to its exports, Table 4 shows that post-FTA, Sri Lanka's exports will increase by 31%, i.e. $94 million in China; 74%, i.e. $524 million in India, while no further rise in exports is expected vis-à-vis Singapore given their existing zero duty structure. Most of these exports will be new exports to these countries with around 30% trade diversion. Sri Lanka's exports to India are expected to cross $1 billion (Table 5).

Sri Lanka's trade balance is expected to improve with respect to India but further deteriorate with respect to China and Singapore (Table 5).

Table 5 Sri Lanka's trade balance before and after the FTA (in US$ million)

Countries	Trade balance	
	2015	Post-FTA
China	−3,423	−3,673
India	−3,558	−3,442
Singapore	−838	−1,029

Source Based on Author's estimations using SMART simulations

3.2 Simulation Results at HS 2-Digit Level: Likely Changes in Sri Lanka's Imports and Exports Post-FTAs

3.2.1 Likely Rise in Sri Lanka's Imports from China and Exports to China Post-FTA

Tables 6 and 7 report the results at HS 2-digit level. At HS 2-digit product level, results show that an imposition of zero import duty by Sri Lanka will lead to maximum increase in imports from China for iron and steel (HS 72) by $52 million (18%), followed by mineral fuel, mineral oils and products (HS 27) by $34 million (34%) and electrical mach. and equipment (HS 85) by $31 million (6%). On the other hand, maximum rise in exports of Sri Lanka to China will be coffee, tea, maté and spices (HS 09) by $19 million (49%) followed by articles of apparel and clothing accessories (HS 61) by $15 million (36%), other veg textile fibres (HS 53) by $11 million (53%) and articles of clothing and accessories by $9 million (38%).

3.2.2 Likely Rise in Sri Lanka's Imports from India and Exports to India Post-FTA

Tables 8 and 9 report the results at HS 2-digit level. At HS 2-digit product level, results show that an imposition of zero import duty by Sri Lanka will lead to maximum increase in imports from India for mineral fuel oils and products (HS 27) by $146 million (26%), *followed by* vehicles other than railway/tramway (HS 87) by $91 million (10%) and coffee, tea, maté and spices (HS 09) by $20 million (21%) and stone, plaster, cement, etc., (HS 68) by $10 million (141%). On the other hand, maximum increase in Sri Lanka's exports will be in coffee, tea, mate and spices (HS 09) by $77 million (60%), followed by residual and waste by food industries (HS 23) by $30 million (52%), knitted and crocheted fabrics (HS 60) by $61 million (192%) and plastics and articles thereof (HS 39) by $37 million (262%).

3.2.3 Likely Rise in Sri Lanka's Imports from Singapore Post-FTA

At HS 2-digit product level, results (Table 10) show that following an imposition of zero import duty by Sri Lanka's imports from Singapore will be highest for mineral fuel and oil (HS 27) by $137 million, followed by tobacco products (HS 24) by $10 million (542%) and electrical mach. and equipment (HS 85) by $3 million (10%). However, exports to Singapore will remain unaffected due to already existing zero tariffs in Singapore. Table 10 reports the results at HS 2-digit level.

Table 6 Sri Lanka's likely rise in imports from China post-FTA: at 2-digit level (USD 1000)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
27	Mineral fuel, mineral oils and products	4.8	266,856	356,624	89,768	34
85	Electrical mach. and equipment	6.7	409,543	435,547	26,004	6
72	Iron and steel	6.2	140,350	165,143	24,794	18
87	Vehicles other than railway or tramway	14.4	106,328	125,680	19,352	18
39	Plastics and articles thereof	8.4	93,488	108,564	15,076	16
73	Articles of iron or steel	14.1	98,335	112,830	14,495	15
48	Paper and paperboard; articles of paper	14.1	65,217	77,963	12,746	20
83	Miscellaneous articles of base metal	17.5	31,158	39,510	8,352	27
84	Boilers, machinery and mechanical	1.7	485,468	493,407	7,939	2
94	Furniture; bedding, mattresses, mattress	20.5	45,417	52,796	7,379	16
62	Articles of apparel and clothing accessories	14.4	29,900	36,467	6,567	22
16	Preparations of meat, of fish or of crustances	19.4	28,667	33,790	5,123	18
96	Miscellaneous manufactured articles	17.3	18,585	23,685	5,100	27

(continued)

Table 6 (continued)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
76	Aluminium and articles thereof	13.3	22,764	27,109	4,345	19
40	Rubber and articles thereof	14	18,983	23,276	4,293	23
68	Stone, plaster, cement, asbestos, mica	20	5,602	9,769	4,168	74
35	Albuminoidal substances; modified starc	6.7	5,474	9,610	4,136	76
8	Edible fruit and nuts; peel of citrus fruit or melons	24.5	11,451	15,372	3,921	34
24	Tobacco and manufactured tobacco substi	125	657	4,244	3,586	546
70	Glass and glassware	10.5	16,198	19,772	3,574	22
44	Wood and articles of wood; wood charcoal	11.4	15,113	18,285	3,172	21
3	Fish and crustaceans, molluscs and other aquatics	13.4	5,823	8,602	2,779	48
9	Coffee, tea, maté and spices	23.1	7,852	10,558	2,705	34
7	Edible veg. and certain roots and tubers	23.9	18,409	21,006	2,597	14
61	Articles of apparel and clothing accessories	14.7	12,869	15,289	2,420	19
42	Articles of leather; saddlery and harness travel	22.4	5,127	6,831	1,704	33
69	Ceramic products	18.3	6,188	7,814	1,626	26

(continued)

Table 6 (continued)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
64	Footwear, gaiters and the like	9.2	3,862	5,207	1,345	35
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	5.9	7,254	8,585	1,332	18
37	Photographic or cinematographic goods	12.3	4,850	5,996	1,146	24
95	Toys, games and sports requisites; parts and accessories thereof	6	11,675	12,814	1,139	10
32	Tanning or dyeing extracts; tannins and	6.3	21,042	22,167	1,126	5
57	Carpets and textile floor coverings	12.8	1,592	2,717	1,124	71
58	Special woven fabrics; tufted textile fab.	0.4	67,570	68,425	855	1
63	Other made-up textile; sets; worn clothing	14.7	3,068	3,898	830	27
20	Preparations of vegetables, fruit, nuts or other parts of plants	25	3,508	4,327	818	23
59	Impregnated, coated/lam. textile	1.3	30,110	30,855	745	2
56	Wadding, felt and nonwovens; special yarn	8	10,363	11,091	728	7

(continued)

Table 6 (continued)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
46	Manufactures of straw, of esparto or of	25	676	1,336	660	98
21	Miscellaneous edible preparations	18.6	4,603	5,166	563	12
65	Headgear and parts thereof	22.8	1,967	2,506	539	27
74	Copper and articles thereof	4.8	8,769	9,306	537	6
90	Optical, photographic, cinematographic, measuring, checking …	1.7	29,698	30,223	525	2
92	Musical instruments; parts and access of such	14	3,599	4,091	492	14
30	Pharmaceutical products	3.3	7,414	7,904	490	7
11	Milling industry product; malt; starches	20.4	3,790	4,253	463	12
23	Residues and waste from the food industries	11.3	6,064	6,488	424	7
82	Tools, implements, cutlery, spoon, forks	4	13,681	14,036	355	3
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	6.1	2,168	2,511	344	16
66	Umbrellas, walking sticks, etc.	19.6	1,671	2,005	334	20

(continued)

Table 6 (continued)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
34	Soap, organic surface-active agents, wa	9.7	2,756	3,013	257	9
17	Sugars and sugar confectionery	12.1	1,269	1,475	207	16
33	Essential oils and resinoids; perf., cosm.	18	643	833	190	30
29	Organic chemicals	0.1	40,629	40,796	167	0
5	Animal products, not elsewhere specified	3.5	4,089	4,252	164	4
91	Clocks and watches and parts thereof	13.1	3,604	3,757	152	4
38	Miscellaneous chemical products	1.6	32,861	32,957	95	0
67	Prepared feathers and down and articles …	23.4	364	457	93	26
36	Explosives; pyrotechnic products; matches	20	346	431	85	25
41	Raw hides and skins (other than furskins)	13.9	168	245	77	46
93	Arms and ammunition; parts and accessories	7.5	907	947	40	4
15	Animal or vegetable fats and oils and theer clv …	19.3	94	127	33	35

(continued)

Table 6 (continued)

Product code HS	Product name	Existing MFN tariff	Before FTA	After FTA	Total change (2014)	Percentage change
89	Ships, boats and floating structures	3.1	118,728	118,755	28	0
19	Preparations of cereals, flour, starch or	23.1	68	95	27	40
4	Dairy produce; birds' eggs; natural honey	25	33	48	14	42
18	Cocoa and cocoa preparations	21.7	70	81	11	16
22	Beverages, spirits and vinegar	25	16	26	10	63
12	Oil seeds and oleaginous fruits;	15.8	766	774	8	1
97	Work of art, collectors, pieces and antique	15	27	35	8	30
43	Furskins and artificial fur; manufactures	21.9	11	16	5	45
54	Man-made filaments; strip and like of man-made	0.3	54,879	54,883	4	0
28	Inorganic chemicals; compounds of precious metals	0.1	48,880	48,883	4	0
45	Cork and articles of cork	15	10	12	3	30
13	Lac; gums, resins and other vegetable saps	1.6	219	221	1	0

Source Based on Author's estimations using SMART simulations

Table 7 Sri Lanka's likely rise in exports to China post-FTA: at 2-digit level (USD 1000)

Product code	Product name	Existing MFN tariff	Exports before	Exports after	Export change in revenue	Percentage change
9	Coffee, tea, maté and spices	7	38,999	58,169	19,170	49
61	Articles of apparel and clothing accessories	12.1	42,939	58,421	15,483	36
53	Other veg textile fibres; paper, yan and wov	7.3	21,611	33,050	11,439	53
62	Articles of apparel and clothing accessories	13.1	25,497	35,096	9,599	38
64	Footwear, gaiters and the like	11.7	22,421	28,244	5,823	26
71	Natural or cultured pearls	9.9	29,166	33,507	4,341	15
40	Rubber and articles thereof	11.3	15,438	19,658	4,220	27
38	Miscellaneous chemical products	6.8	5,997	8,057	2,059	34
63	Other made-up textile; sets; worn clothing	14.5	1,998	3,620	1,622	81
26	Ores, slag and ash	1.1	15,613	16,823	1,210	8
3	Fish and crustaceans, molluscs and other aquatics	8.8	1,241	2,148	907	73
85	Electrical mach. and equipment	3.5	15,882	16,554	671	4

(continued)

Table 7 (continued)

Product code	Product name	Existing MFN tariff	Exports before	Exports after	Export change in revenue	Percentage change
90	Optical, photographic, cinematographic, measuring, checking …	4.3	5,170	5,592	423	8
69	Ceramic products	13	285	574	289	101
48	Paper and paperboard; articles of paper pulp of paper	7.1	1,636	1,907	272	17
14	Vegetable plaiting materials; vegetable prod	9.7	1,227	1,481	254	21
58	Sp. woven fabrics; tufted textile fab.	9.3	1,085	1,331	246	23
96	Miscellaneous manufactured articles	19.9	138	381	244	177
84	Boilers, machinery and mechanical	5.5	1,654	1,885	231	14
60	Knitted or crocheted fabrics	8.4	929	1,121	192	21
33	Essential oils and resinoids; perf., cosm.	11.8	391	555	164	42
21	Miscellaneous edible preparations	15.6	593	740	147	25
39	Plastics and articles thereof	7.4	866	1,009	143	17
42	Articles of leather; saddlery and harness travel	10.7	652	783	130	20

(continued)

Table 7 (continued)

Product code	Product name	Existing MFN tariff	Exports before	Exports after	Export change in revenue	Percentage change
54	Man-made filaments; strip and like of man-made	6.6	635	718	83	13
87	Vehicles other than railway or tramway	16.5	215	289	74	34
52	Cotton	9	282	355	73	26
83	Miscellaneous articles of base metal	10.7	300	367	66	22
56	Wadding, felt and nonwovens; special yarn	7.2	488	554	66	14
94	Furniture; bedding, mattresses, mattress	4.1	140	193	53	38
31	Fertilisers	4.7	427	479	52	12
65	Headgear and parts thereof	18.1	100	146	47	47
74	Copper and articles thereof	12.9	150	194	44	29
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	2	2,213	2,255	41	2
12	Oil seeds and oleaginous fruits	13.5	95	117	22	23
70	Glass and glassware	12.2	80	98	18	23
68	Stone, plaster, cement, asbestos, mica	12.2	53	68	16	30
59	Impregnated, coated/lam. textile	8.8	61	73	12	20

(continued)

Table 7 (continued)

Product code	Product name	Existing MFN tariff	Exports before	Exports after	Export change in revenue	Percentage change
7	Edible vegetables and certain roots and tubers	6.5	74	85	11	15
55	Man-made staple fibres	6.8	39	48	9	23
41	Raw hides and skins (other than furskins)	5.5	43	52	9	21
73	Articles of iron or steel	10.6	39	47	8	21
44	Wood and articles of wood; wood charcoal	2.6	1,639	1,647	8	0
15	Animal or vegetable fats and oils and theer clv …	4.5	76	83	7	9
76	Aluminium and articles thereof	11.3	25	29	5	20
30	Pharmaceutical products	3	73	77	5	7
72	Iron and steel	8	14	17	3	21
8	Edible fruit and nuts; peel of citrus fruit or melons	6	25	28	3	12
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare earth metals, …	5.5	21	24	3	14
5	Animal products, not elsewhere specified	12	9	12	3	33

(continued)

Table 7 (continued)

Product code	Product name	Existing MFN tariff	Exports before	Exports after	Export change in revenue	Percentage change
91	Clocks and watches and parts thereof	13.7	6	9	3	50
95	Toys, games and sports requisites; parts and accessories thereof	5	324	326	2	1
22	Beverages, spirits and vinegar	20	4	6	2	50
92	Musical instruments; parts and access of such	19.8	2	3	1	50
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, …	2.7	10	11	1	10
35	Albuminoidal subs; modified starches; glues; e	7.9	5	6	1	20
82	Tools, implements, cutlery, spoon, forks	9.6	3	3	1	33
88	Aircraft, spacecraft and parts thereof	2	4	4	1	25

Source Based on Author's estimations using SMART simulations

Table 8 Sri Lanka's likely rise in imports from India post-FTA: at 2-digit level (USD 1000)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
27	Mineral fuel, mineral oils and products	3.8	669,064	840,043	170,979	26
87	Vehicles other than railway or tramway	7	570,356	627,621	57,265	10
9	Coffee, tea, maté and spices	21.7	79,305	95,793	16,488	21
68	Stone, plaster, cement, asbestos, mica	5.2	11,040	26,607	15,567	141
48	Paper and paperboard; articles of paper pulp …	9	100,963	112,449	11,486	11
10	Cereals	11.7	59,344	65,698	6,354	11
85	Electrical mach. and equipment.	1.8	118,877	123,726	4,849	4
7	Edible veg. and certain roots and tubers	19.4	21,425	26,058	4,633	22
39	Plastics and articles thereof	2	97,086	101,640	4,553	5
24	Tobacco and manufactured tobacco substi	95	922	5,313	4,391	476
19	Preparations of cereals, flour, starch or	22	13,039	17,413	4,374	34
40	Rubber and articles thereof	14.6	28,911	33,204	4,292	15
8	Edible fruit and nuts; peel of citrus fruit or melons	20.5	4,347	8,229	3,882	89
72	Iron and steel	1.5	194,795	198,343	3,547	2
84	Boilers, machinery and mechanical	0.8	119,839	122,844	3,005	3
83	Miscellaneous articles of base metal	8	9,196	12,038	2,842	31
21	Miscellaneous edible preparations	19	11,933	14,553	2,620	22
76	Aluminium and articles thereof	9.5	23,418	25,872	2,455	10
73	Articles of iron or steel	3.5	49,522	51,724	2,202	4

(continued)

Table 8 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
32	Tanning or dyeing extracts; tannins and	4	23,779	25,901	2,122	9
3	Fish and crustaceans, molluscs and other aquatics	10	11,986	13,964	1,978	17
12	Oil seeds and oleaginous fruits	12.5	6,760	8,153	1,393	21
96	Miscellaneous manufactured articles	9.6	8,938	10,317	1,379	15
11	Milling industry product; malt; starches	20.8	4,693	5,956	1,263	27
14	Vegetable plaiting materials; vegetable prod	8.3	7,368	8,568	1,200	16
38	Miscellaneous chemical products	0.3	36,722	37,441	719	2
41	Raw hides and skins (other than furskins)	5.7	3,694	4,317	623	17
30	Pharmaceutical products	2.8	166,741	167,305	565	0
82	Tools, implements, cutlery, spoon, forks	4.1	6,021	6,552	530	9
69	Ceramic products	2.3	2,486	2,944	458	18
70	Glass and glassware	1.7	15,450	15,866	416	3
56	Wadding, felt and nonwovens; special yarn	6.2	2,004	2,372	368	18
20	Preparations of vegetables, fruit, nuts or other parts of plants	25	961	1,328	367	38
94	Furniture; bedding, mattresses, mattress	15.9	4,162	4,514	352	8

(continued)

Table 8 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
34	Soap, organic surface-active agents, wa	2.4	23,195	23,461	266	1
64	Footwear, gaiters and the like	6.5	1,128	1,351	224	20
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0.9	15,365	15,587	222	1
15	Animal or vegetable fats and oils and their clv …	7.3	1,030	1,198	168	16
35	Albuminoidal substances; modified starc	2.7	8,300	8,462	163	2
33	Essential oils and resinoids; perf., cosm.	1.8	21,433	21,588	154	1
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	5.3	7,632	7,774	142	2
74	Copper and articles thereof	3.8	14,046	14,186	140	1
22	Beverages, spirits and vinegar	18.8	403	527	125	31
4	Dairy produce; birds' eggs; natural honey	21.6	409	502	93	23
16	Preparations of meat, of fish or of crustances	21.6	278	365	87	31
95	Toys, games and sports requisites; parts and accessories thereof	0.4	1,471	1,548	77	5

(continued)

Table 8 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
59	Impregnated, coated/lam. textile	0.8	3,029	3,099	69	2
6	Live trees and other plants; bulbs, roots	16.3	427	473	46	11
17	Sugars and sugar confectionery	13.5	2,162	2,201	39	2
18	Cocoa and cocoa preparations	20	20	34	14	70
46	Manufactures of straw, of esparto or of	18.8	39	50	11	28
13	Lac; gums, resins and other vegetable saps	3.3	2,653	2,657	4	0
23	Residues and waste from the food industries	0.9	62,487	62,489	2	0
66	Umbrellas, walking sticks, etc.	10	612	614	2	0
1	Live animals	9	19	20	2	11

Source Based on Author's estimations using SMART simulation

Table 9 Sri Lanka's likely rise in exports to India post-FTA: at 2-digit level (USD 1000)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
09	Coffee, tea, maté and spices	57.9	85,724	136,898	51,174	60
23	Residues and waste from the food industries	27	48,908	74,246	25,338	52
60	Knitted or crocheted fabrics	10	21,180	61,770	40,590	192
39	Plastics and articles thereof	9.03	14,130	51,090	36,960	262
85	Electrical mach. and equipment	7.3	37,565	43,843	6,279	17
08	Edible fruit and nuts; peel of citrus fruit or melons	43.57	22,410	39,045	16,635	74
94	Furniture; bedding, mattresses, mattress	9.97	16,806	34,164	17,358	103
47	Pulp of wood or of other fibrous cellulosic material	10	26,228	31,974	5,746	22
68	Stone, plaster, cement, asbestos, mica	10	17,463	30,088	12,625	72

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
48	Paper and paperboard; articles of paper pulp of paper	10	11,778	28,629	16,851	143
40	Rubber and articles thereof	12.22	19,207	28,261	9,055	47
11	Milling industry product; malt; starches	30	1,640	24,712	23,073	1,407
22	Beverages, spirits and vinegar	120	4,444	23,441	18,997	428
84	Boilers, machinery and mechanical	6.79	13,955	20,023	6,068	43
58	sp. Woven fabrics; tufted textile fab.	10	14,478	19,115	4,637	32
44	Wood and articles of wood; wood charcoal	9.4	9,969	17,907	7,938	80
74	Copper and articles thereof	5.68	14,660	16,944	2,284	16
70	Glass and glassware	9.9	9,606	11,334	1,728	18
78	Lead and articles thereof	5	9,310	10,310	1,000	11

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
87	Vehicles other than railway or tramway	11.33	3,636	9,797	6,161	169
12	Oil seeds and oleaginous fruits	26.25	4,427	9,160	4,733	107
69	Ceramic products	10	1,599	7,079	5,479	343
33	Essential oils and resinoids; perf., cosm.	13	3,880	5,544	1,664	43
73	Articles of iron or steel	10	2,117	5,101	2,984	141
76	Aluminium and articles thereof	7	3,692	4,566	875	24
54	Man-made filaments; strip and like of man-made	10	3,547	4,383	836	24
16	Preparations of meat, of fish or of crustances	53.33	1,509	4,192	2,683	178

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare earth metals, of radioactive elements or of isotopes	7.25	3,393	3,754	361	11
26	Ores, slag and ash	3.5	3,254	3,484	230	7
21	Miscellaneous edible preparations	50	1,413	3,344	1,932	137
95	Toys, games and sports requisites; parts and accessories thereof	10	2,518	3,250	732	29
52	Cotton	10	2,480	3,141	661	27
82	Tools, implements, cutlery, spoon, forks	10	2,176	3,105	929	43
55	Man-made staple fibres	10	1,984	3,075	1,091	55
72	Iron and steel	5.42	2,452	3,011	559	23
61	Articles of apparel and clothing accessories	10	2,026	2,719	694	34

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	7.16	2,255	2,682	427	19
38	Miscellaneous chemical products	8.64	1,838	2,531	692	38
83	Miscellaneous articles of base metal	10	1,943	2,353	410	21
88	Aircraft, spacecraft and parts thereof	5.17	1,886	1,983	98	5
96	Miscellaneous manufactured articles	10	1,411	1,916	505	36
59	Impregnated, coated/lam. textile	10	1,517	1,747	230	15
71	Natural or cultured pearls	10	1,257	1,694	436	35

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
63	Other made-up textile; sets; worn clothing	9	1,124	1,357	233	21
05	Animal products, not elsewhere specified	25	940	1,336	396	42
13	Lac; gums, resins and other vegetable saps	29.2	838	1,332	494	59
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	3.88	826	1,070	244	30
64	Footwear, gaiters and the like	10	892	1,055	163	18
18	Cocoa and cocoa preparations	30	449	1,007	558	124
34	Soap, organic surface-active agents, wa	9.38	808	1,004	196	24
62	Articles of apparel and clothing accessories	10	646	993	347	54

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
86	Railway or tramway locomotives, rollin	10	106	890	783	736
20	Preparations of vegetables, fruit, nuts or other parts of plants	30	431	755	324	75
56	Wadding, felt and nonwovens; special yarn	10	482	740	258	54
53	Other veg textile fibres; paper, yan and wov	10	340	542	201	59
32	Tanning or dyeing extracts; tannins and	8.65	366	459	93	25
19	Preparations of cereals, flour, starch or	30	299	455	156	52
79	Zinc and articles thereof	5	373	416	42	11
30	Pharmaceutical products	10	340	409	69	20
07	Edible veg. and certain roots and tubers	30	222	345	123	56

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
27	Mineral fuel, mineral oils and products	4.72	262	309	47	18
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	5	224	244	20	9
41	Raw hides and skins (other than furskins)	8	156	205	49	31
67	Prepared feathers and down and articles …	10	115	173	58	50
57	Carpets and textile floor coverings	10	98	129	31	32
89	Ships, boats and floating structures	25	16	101	85	544
35	Albuminoidal substances; modified starc	10	76	90	14	18
29	Organic chemicals	7.5	62	73	11	18
66	Umbrellas, walking sticks, etc.	10	18	39	21	115
50	Silk	10	19	23	4	19

(continued)

Table 9 (continued)

Product code	Product name	Existing MFN applied tariff	Exports before (in 1000 USD)	Exports after (in 1000 USD)	Export change in revenue (in 1000 USD)	Percentage change
03	Fish and crustaceans, molluscs and other aquatics	30	3	14	11	343
46	Manufactures of straw, of esparto or of	10	10	13	3	26
37	Photographic or cinematographic goods	10	7	10	2	31
42	Articles of leather; saddlery and harness travel	10	7	9	2	22
65	Headgear and parts thereof	10	2	3	1	27
14	Vegetable plaiting materials; vegetable prod	30	1	2	1	52
97	Work of art, collectors, pieces and antique	10	0.4	0.5	0.1	23
80	Tin and articles thereof	10	0.2	0.3	0.2	87
02	Meat and edible meat offal	30	0.2	0.3	0.1	44

Source Based on Author's estimations using SMART simulations

Table 10 Sri Lanka's likely rise in imports from Singapore post-FTA: at 2-digit level (USD 1000)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
27	Mineral fuel, mineral oils and products	2.5	1,003,235	1,233,752	230,517	23
24	Tobacco and manufactured tobacco Substi	95	835	5,360	4,525	542
85	Electrical mach. and equipment	7.1	36,825	40,544	3,719	10
19	Preparations of cereals, flour, starch or	21	12,041	14,598	2,558	21
84	Boilers, machinery and mechanical	2.1	52,729	55,023	2,294	4
48	Paper and paperboard; articles of paper pulp	14.9	11,094	13,249	2,154	19
32	Tanning or dyeing extracts; tannins and	7.2	11,443	13,380	1,937	17
39	Plastics and articles thereof	10.2	27,237	28,489	1,252	5
28	Inorganic chemicals; organic or inorganic compounds of precious metals …	0.5	1,930	3,047	1,117	58
57	Carpets and textile floor coverings	15	479	1,557	1,078	225
73	Articles of iron or steel	15.1	4,270	5,337	1,067	25
72	Iron and steel	7	6,152	7,210	1,058	17
33	Essential oils and resinoids; perf., cosm.	19.2	5,645	6,607	962	17
21	Miscellaneous edible preparations	19.2	2,729	3,613	884	32
83	Miscellaneous articles of base metal	17.6	1,376	2,111	736	53

(continued)

Table 10 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
40	Rubber and articles thereof	15.3	3,279	3,927	648	20
94	Furniture; bedding, mattresses, mattress	21.3	1,527	2,144	617	40
87	Vehicles other than railway or tramway	17.2	1,713	2,325	612	36
35	Albuminoidal substances; modified starc	10.3	567	1,076	510	90
18	Cocoa and cocoa preparations	21.7	1,910	2,364	454	24
96	Miscellaneous manufactured articles	18.5	1,260	1,677	417	33
8	Edible fruit and nuts; peel of citrus fruit …	24	654	993	339	52
76	Aluminium and articles thereof	14.5	1,913	2,236	323	17
38	Miscellaneous chemical products	0.9	18,509	18,831	322	2
37	Photographic or cinematographic Goods	10.6	759	966	207	27
68	Stone, plaster, cement, asbestos, mica	19.5	415	563	148	36
34	Soap, organic surface-active agents, Wa	9.5	3,130	3,277	147	5
44	Wood and articles of wood; wood charcoal	14.9	596	743	147	25
22	Beverages, spirits and vinegar	25	174	303	129	74
62	Articles of apparel and clothing accessories	14	250	339	89	36

(continued)

Table 10 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
70	Glass and glassware	12.1	318	405	88	28
15	Animal or vegetable fats and oils clv …	18	178	255	77	43
74	Copper and articles thereof	4.7	726	792	66	9
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or	1.9	7,229	7,293	64	1
63	Other made-up textile; sets; worn clothing	15	202	264	62	31
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	6.6	711	749	37	5
20	Preparations of vegetables, fruit, nuts or other parts of plants	25	66	101	35	53
42	Articles of leather; saddlery and harness travel	24.6	72	106	34	47
17	Sugars and sugar confectionery	11.1	76	104	28	37
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	8.1	262	288	26	10
9	Coffee, tea, maté and spices	24.8	45	71	26	58
3	Fish and crustaceans, molluscs and other aquatics	12.5	95	117	22	23

(continued)

Table 10 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
91	Clocks and watches and parts thereof	5	407	429	22	5
59	Impregnated, coated/lam. textile	1.4	4,809	4,829	19	0
61	Articles of apparel and clothing accessories	14.3	66	84	17	26
7	Edible veg. and certain roots and tubers	15	53	69	16	30
56	Wadding, felt and nonwovens; yarn	9.6	72	85	13	18
69	Ceramic products	15.7	41	53	11	27
11	Milling industry product; malt; starches	22.5	28	38	10	36
82	Tools, implements, cutlery, spoon, forks	3.3	1,570	1,579	8	1
30	Pharmaceutical products	1.8	1,704	1,710	6	0
65	Headgear and parts thereof	23	13	18	5	38
36	Explosives; pyrotechnic products; matches	21.7	11	15	4	36
4	Dairy produce; birds' eggs; natural honey	25	4	8	4	100
16	Preparations of meat, of fish or of crustances	25	4	8	4	100
41	Raw hides and skins (other than furskins)	15	11	14	3	27
95	Toys, games and sports requisites; parts and accessories thereof	5.2	186	189	3	2

(continued)

Table 10 (continued)

Product code	Product name	Existing MFN applied tariff	Before	After	Total change	Percentage change
92	Musical instruments; parts and access of such	12.9	7	10	2	29
23	Residues and waste from the food industries	13.3	2,754	2,755	1	0
64	Footwear, gaiters and the like	10	9	10	1	11

4 Identification of Sri Lanka's New Products for Exports to China, India and Singapore

Using the above-mentioned methodology, new products have been identified for Sri Lanka's exports to China, India and Singapore.

4.1 New Products for Exports to China

Table 11 reports the new products which can be exported to China. Products with exports above $5 million (avg of 2012–15) are categorised as 'Established Exports' of Sri Lanka, while products with total exports between $1 and $5 mn are categorised as 'Potential New Products.' Undertaking a rigorous competitiveness analysis using four indices, including RCA, CTB, POS and unit cost analysis, of Sri Lanka's competitiveness vis-a-vis the existing exporters of the products to China, the following products have been identified along with the weak competitors and Sri Lanka's potential market share.

There are eight unique HS 6-digit products, where Sri Lanka can capture $371 million market share from the weak competitors (which have been identified). China's global imports in these products are $3.6 billion, while Sri Lanka's exports to China of these products are $5.6 million and Sri Lanka's global exports in these products are $99 million. These products are HS 581092 (embroidery in the piece, in strips or in motifs); HS 250410 (natural graphite); HS 030622 and HS 030624 (crustaceans, whether in shell or not, live); HS 580710 (labels, badges and similar articles of textile); HS 848079 (moulding boxes for metal foundry; mould bases; HS 251612 (granite, porphyry, basalt, sandstone and other building stones; and HS 610791 (men's or boys' underpants, briefs and nightshirts).

The analyses show that in these products, Sri Lanka has a competitive advantage but lacks supply capacity. These areas can therefore be prioritised in terms of potential investment areas for Sri Lanka.

4.2 New Products for Exports to India

For India, 10 unique products have been identified, where Sri Lanka's exports can increase by $655 million by capturing market share from weak competitors (Table 12). In 2015, Sri Lanka's exports in these products to India were $35 million, while its global exports in these products were $49 million. India's global imports are around $6.4 billion. These products are HS 071360 (dried leguminous vegetables, shelled or not); HS 261510 (niobium, tantalum, vanadium, ores and concentrates); HS 381230 (prepared rubber accelerators; compound plasticisers); HS 400400 (waste, parings and scrap); HS 540245 (synthetic filament yarn (other than

Table 11 New products for Sri Lanka's exports to China (in USD 1000)

S.No.	Product code	Description 4 digit	China's tariffs	Weak competitor	Competitors exports	Sri Lanka's exports to world	Sri Lanka's exports to China	China's global imports
1	581092	Embroidery in the piece, in strips or in motifs	10	Korea, Rep.	8,169	1,559	38	30,595
2	250410	Natural graphite		Japan	10,472	4,294	109	16,698
3	030622	Crustaceans, whether in shell or not, live	7.5	Canada	73,339	3,749	74	138,479
4	030622	Crustaceans, whether in shell or not, live	7.5	United States	63,729	3,749	74	138,479
5	030624	Crustaceans, whether in shell or not, live	11.2	Bangladesh	41,050	3,734	44	330,373
6	030624	Crustaceans, whether in shell or not, live	11.2	Korea, Dem. Rep.	18,801	3,734	44	330,373
7	030624	Crustaceans, whether in shell or not, live	11.2	Madagascar	13,688	3,734	44	330,373
8	030624	Crustaceans, whether in shell or not, live	11.2	Myanmar	17,265	3,734	44	330,373

(continued)

Table 11 (continued)

S.No.	Product code	Description 4 digit	China's tariffs	Weak competitor	Competitors exports	Sri Lanka's exports to world	Sri Lanka's exports to China	China's global imports
9	30624	Crustaceans, whether in shell or not, live	11.2	Pakistan	10,535	3,734	44	330,373
10	30624	Crustaceans, whether in shell or not, live	11.2	Philippines	11,881	3,734	44	330,373
11	580710	Labels, badges and similar articles of textile	10	Hong Kong, China	14,481	1,295	8	50,301
12	581092	Embroidery in the piece, in strips or in motifs	10	Korea, Dem. Rep.	6,722	1,559	38	30,595
13	848079	Moulding boxes for metal foundry; mould bases	5	Germany	24,486	1,503	38	117,728
14	848079	Moulding boxes for metal foundry; mould bases	5	Japan	24,650	1,503	38	117,728

(continued)

Table 11 (continued)

S.No.	Product code	Description 4 digit	China's tariffs	Weak competitor	Competitors exports	Sri Lanka's exports to world	Sri Lanka's exports to China	China's global imports
15	848079	Moulding boxes for metal foundry; mould bases	5	United States	7,184	1,503	38	117,728
16	250410	Natural graphite		Brazil	240	4,294	109	16,698
17	250410	Natural graphite		Germany	1,282	4,294	109	16,698
18	250410	Natural graphite		Malaysia	148	4,294	109	16,698
19	250410	Natural graphite		United States	581	4,294	109	16,698
20	251612	Granite, porphyry, basalt, sandstone and other		South Africa	586	1,612	947	70,275
21	581092	Embroidery in the piece, in strips or in motifs	10	Italy	611	1,559	38	30,595
22	581092	Embroidery in the piece, in strips or in motifs.	10	Japan	1,731	1,559	38	30,595
23	610791	Men's or boys' underpants, briefs, nightshirts	14	Hong Kong, China	859	2,471	3	3,495

(continued)

Table 11 (continued)

S.No.	Product code	Description 4 digit	China's tariffs	Weak competitor	Competitors exports	Sri Lanka's exports to world	Sri Lanka's exports to China	China's global imports
24	250410	Natural graphite		Korea, Rep.	528	4,294	109	16,698
25	581092	Embroidery in the piece, in strips or in motifs	10	Thailand	1,147	1,559	38	30,595
26	848079	Moulding boxes for metal foundry; mould bases; etc	5	Malaysia	2,182	1,503	38	117,728
27	250410	Natural graphite		United Kingdom	441	4,294	109	16,698
28	251612	Granite, porphyry, basalt, sandstone and other monumental or building stone	0	India	5,182	1,612	947	70,275
29	30622	Crustaceans, whether in shell or not, live	7.5	New Zealand	190	3,749	74	138,479
30	30622	Crustaceans, whether in shell or not, live	7.5	Philippines	1,885	3,749	74	138,479

(continued)

Table 11 (continued)

S.No.	Product code	Description 4 digit	China's tariffs	Weak competitor	Competitors exports	Sri Lanka's exports to world	Sri Lanka's exports to China	China's global imports
31	250410	Natural graphite		Korea, Dem. Rep.	2,504	4,294	109	16,698
32	251612	Granite, porphyry, basalt, sandstone and other	0	Angola	946	1,612	947	70,275
33	251612	Granite, porphyry, basalt, sandstone and other	0	Namibia	1,617	1,612	947	70,275
34	581092	Embroidery in the piece, in strips or in motifs	10	Hong Kong, China	1,249	1,559	38	30,595
35	581092	Embroidery in the piece, in strips or in motifs	10	Myanmar	1,352	1,559	38	30,595
				Total	371,714	98,885	5,646	3,689,717

Source Based on Author's estimations using competitiveness analyses

Table 12 New products for Sri Lanka's exports to India (in USD 1000)

	Product code	Description 4 digit	India's tariffs	Weak competitor	Competitors exports to India	Sri Lanka's exports to world	Sri Lanka's exports to India	India's global imports
1	540245	Synthetic filament yarn (other than sewing thread)	10	China	3,808	1,243	1,139	74,251
2	381230	Prepared rubber accelerators; compound plasticisers	7.5	China	42,946	1,058	1,052	163,438
3	381230	Prepared rubber accelerators; compound plasticisers	7.5	Germany	15,405	1,058	1,052	163,438
4	381230	Prepared rubber accelerators; compound plasticisers	7.5	United States	26,402	1,058	1,052	163,438
5	540245	Synthetic filament yarn (other than sewing thread), not	10	Vietnam	25,632	1,243	1,139	74,251
6	631090	Used or new rags, scrap twine	5	United States	5,551	1,944	460	54,474

(continued)

Table 12 (continued)

	Product code	Description 4 digit	India's tariffs	Weak competitor	Competitors exports to India	Sri Lanka's exports to world	Sri Lanka's exports to India	India's global imports
7	740319	Refined copper and copper alloys, unwrought	5	Spain	1,560	1,275	1,275	81,314
8	740811	Copper wire	5	Italy	2,164	4,196	4,194	528,520
9	740811	Copper wire	5	Korea, Rep.	10,646	4,196	4,194	528,520
10	740811	Copper wire	5	Malaysia	4,704	4,196	4,194	528,520
11	830890	Clasps, frames with clasps, buckles, buckle-clasps	10	Germany	1,836	1,674	637	61,246
12	830890	Clasps, frames with clasps, buckles, buckle-clasps	10	Spain	1,228	1,674	637	61,246
13	830890	Clasps, frames with clasps, buckles, buckle-clasps	10	United States	3,888	1,674	637	61,246
14	71360	Dried leguminous vegetables, shelled, whether or not	30	Kenya	6,140	1,460	436	381,265

(continued)

Table 12 (continued)

	Product code	Description 4 digit	India's tariffs	Weak competitor	Competitors exports to India	Sri Lanka's exports to world	Sri Lanka's exports to India	India's global imports
15	71360	Dried leguminous vegetables, shelled, whether or not	30	Malawi	33,680	1,460	436	381,265
16	71360	Dried leguminous vegetables, shelled, whether or not	30	Mozambique	57,210	1,460	436	381,265
17	71360	Dried leguminous vegetables, shelled, whether or not	30	Myanmar	187,077	1,460	436	381,265
18	71360	Dried leguminous vegetables, shelled, whether or not	30	Sudan	13,392	1,460	436	381,265
19	71360	Dried leguminous vegetables, shelled, whether or not	30	Tanzania	86,767	1,460	436	381,265

(continued)

Table 12 (continued)

	Product code	Description 4 digit	India's tariffs	Weak competitor	Competitors exports to India	Sri Lanka's exports to world	Sri Lanka's exports to India	India's global imports
20	71360	Dried leguminous vegetables, shelled, whether or not	30	Uganda	1,029	1,460	436	381,265
21	740319	Refined copper and copper alloys, unwrought	5	South Africa	1,033	1,275	1,275	81,314
22	740319	Refined copper and copper alloys, unwrought	5	Zambia	116,042	1,275	1,275	81,314
23	740811	Copper wire	5	Germany	1,903	4,196	4,194	528,520
24	600490	Knitted or crocheted fabrics of a width exceeding 30	10	Thailand	176	1,386	1,092	10,973
25	71360	Dried leguminous vegetables, shelled, whether or not skinned or split	30	Afghanistan	364	1,460	436	381,265

(continued)

Table 12 (continued)

	Product code	Description 4 digit	India's tariffs	Weak competitor	Competitors exports to India	Sri Lanka's exports to world	Sri Lanka's exports to India	India's global imports
26	261510	Niobium, tantalum, vanadium or zirconium ores and concentrates	2.5	Nigeria	356	1,116	303	58,919
27	400400	Waste, parings and scrap of	10	New Zealand	268	1,073	307	15,213
28	540245	Synthetic filament yarn (other than sewing thread)	10	China	3,808	1,243	1,139	74,251
		Total			655,017	49,732	34,734	6,444,522

Source Based on Author's estimations using competitiveness analyses

sewing thread), HS 600490 (knitted or crocheted fabrics of a width exceeding 30); HS 631090 (used or new rags, scrap twine); HS 740319 (refined copper and copper alloys, unwrought); HS 740811 (copper wire); and HS 830890 (clasps, frames with clasps, buckles, buckle-clasps).

4.3 New Products for Exports to Singapore

Four unique products have been identified, which can increase Sri Lanka's exports to Singapore by $814 million, by capturing market share from the weak competitors (Table 13), while currently Sri Lanka's exports in these products to Singapore are $34 million and its global exports are $92 million. Singapore's global imports in these products are around $10 billion. These products are HS 330300 (perfumes and toilet waters); HS 121190 (plants and parts of plants); HS 220830 (undenatured ethyl alcohol of an alcoholic strength by volume of less); HS 820719 (interchangeable tools for hand tools).

5 Sri Lanka's Export Competitiveness in Services

To maximise the economic benefits following a free trade agreement, the importance of including trade in services, investments and enhancement of cooperation in the FTAs has been emphasised. Sri Lanka's global exports of services nearly doubled in 2015 as compared to 2011. Maximum exports are of travel services, followed by transport services and telecommunications, computer and information services (Table 14).

To estimate Sri Lanka's global competitiveness of services, we undertake a rigorous competitiveness analysis using four competitiveness indices—comparative export performance index; bilateral RCA; trade complementarity index; and trade overlap. The results of these estimations are reported below.

5.1 Comparative Export Performance (CEP) Index

The comparative export performance (CEP) index is calculated for disaggregated services to estimate Sri Lanka's export competitiveness in the global economy.

CEP is estimated as follows:

$$\frac{X_{i,a}/\sum_a X_{i,a}}{\sum_i X_{i,a}/a \sum_i i,a}.$$

Table 13 New products for Sri Lanka's exports to Singapore (in USD 1000)

S.No.	Product code	Description 4 digit	Competitor	Competitors exports to Singapore	Sri Lanka's exports to world	Sri Lanka's exports to Singapore	Singapore's global imports
1	330300	Perfumes and toilet waters	Spain	34,822	3,011	2,864	657,097
2	820719	Interchangeable tools for hand tools	China	14,382	2,652	834	132,228
3	820719	Interchangeable tools for hand tools	Japan	4,750	2,652	834	132,228
4	820719	Interchangeable tools for hand tools, whether or not power	Malaysia	6,406	2,652	834	132,228
5	220830	Undenatured ethyl alcohol of an alcoholic strength by volume of less	Malaysia	1,142	2,383	209	612,007
6	220830	Unfeatured ethyl alcohol of an alcoholic strength by volume of less	United States	30,187	2,383	209	612,007
7	330300	Perfumes and toilet waters	Germany	10,432	3,011	2,864	657,097
8	330300	Perfumes and toilet waters	United Arab Emirates	6,538	3,011	2,864	657,097
9	121190	Plants and parts of plants (including)	China	44,588	4,473	80	132,726

(continued)

Table 13 (continued)

S.No.	Product code	Description 4 digit	Competitor	Competitors exports to Singapore	Sri Lanka's exports to world	Sri Lanka's exports to Singapore	Singapore's global imports
10	121190	Plants and parts of plants (including)	Other Asia, nes	1,230	4,473	80	132,726
11	330300	Perfumes and toilet waters	France	332,046	3,011	2,864	657,097
12	330300	Perfumes and toilet waters	Netherlands	3,037	3,011	2,864	657,097
13	330300	Perfumes and toilet waters	Switzerland	16,669	3,011	2,864	657,097
14	330300	Perfumes and toilet waters	United Kingdom	61,694	3,011	2,864	657,097
15	330300	Perfumes and toilet waters	United States	89,095	3,011	2,864	657,097
16	820719	Interchangeable tools for hand tools, e	India	4,537	2,652	834	132,228
17	820719	Interchangeable tools for hand tools	United States	58,158	2,652	834	132,228
18	121190	Plants and parts of plants (including)	Hong Kong, China	7,261	4,473	80	132,726
19	121190	Plants and parts of plants (including)	Malaysia	13,491	4,473	80	132,726
20	121190	Plants and parts of plants (including)	Nepal	2,015	4,473	80	132,726

(continued)

Table 13 (continued)

S.No.	Product code	Description 4 digit	Competitor	Competitors exports to Singapore	Sri Lanka's exports to world	Sri Lanka's exports to Singapore	Singapore's global imports
21	121190	Plants and parts of plants (including)	Papua New Guinea	4,418	4,473	80	132,726
22	220830	Undenatured ethyl alcohol of an alcoholic	India	1,304	2,383	209	612,007
23	220830	Undenatured ethyl alcohol of an alcoholic	Panama	2,060	2,383	209	612,007
24	820719	Interchangeable tools for hand tools	Kenya	2,786	2,652	834	132,228
25	121190	Plants and parts of plants (including)	Japan	638	4,473	80	132,726
26	330300	Perfumes and toilet waters	Spain	34,822	3,011	2,864	657,097
27	820719	Interchangeable tools for hand tools	China	14,382	2,652	834	132,228
28	820719	Interchangeable tools for hand tools	Japan	4,750	2,652	834	132,228
29	820719	Interchangeable tools	Malaysia	6,406	2,652	834	132,228
				814,043	91,804	34,676	10,481,035

Source Based on Author's estimations using competitiveness analyses

Table 14 Sri Lanka's export of services to the world market (in US$ million)

Services	2011	2012	2013	2014	2015
All services	3,084	3,800	4,685	5,605	6,397
Memo item: commercial services	*3,062*	*3,773*	*4,657*	*5,574*	*6,366*
Travel	830	1,039	1,715	2,431	2,981
Transport	1,392	1,634	1,784	1,923	2,105
Telecommunications, computer and information services	440	673	719	748	805
Financial services	0	232	235	256	254
Insurance and pension services	91	107	109	115	119
Construction	43	50	55	58	60
Other business services	266	39	39	43	42
Government goods and services n.i.e.	22	27	28	31	31

Source ITC, trade map

Where

$X_{i,a}$ export of a particular service (i) by country a (Sri Lanka)
$\sum_a X_{i,a}$ total export of the services by country a (Sri Lanka)
$\sum_{Xi} X_{i,a}$ total export of a particular service (i) by the world
$\sum_a \sum_i X_{i,a}$ total export of services by the world.

CEP index is calculated by dividing a country's share in the exports of a given service category by the share in the world export of services. The comparative export performance (CEP) index of services is estimated for Sri Lanka at different service level. CEP greater than 1 implies a competitive advantage vis-à-vis global exports. Table 15 shows that Sri Lanka enjoys competitive advantage in travel services; transport services and telecommunication, computer and information services; however, Sri Lanka is losing its competitiveness over time in transport services as well as

Table 15 CEP indices in disaggregated service category: Sri Lanka versus World

Service label	2011	2012	2013	2014	2015
Travel	*1.14*	*1.14*	*1.51*	*1.74*	*1.87*
Transport	*2.41*	*2.25*	*2.06*	*1.83*	*1.85*
Telecommunications, computer and information services	*1.93*	*2.21*	*1.87*	*1.44*	*1.33*
Financial services	0.00	0.76	0.61	0.55	0.46
Insurance and pension services	1.22	1.12	0.92	0.79	0.73
Construction	0.72	0.65	0.62	0.51	0.54
Other business services	0.44	0.05	0.04	0.04	0.03
Government goods and services n.i.e.	0.44	0.43	0.40	0.39	0.35

Source Indices based on ITC, trade map database

telecommunication, computer and information services as the value of CEP shows a decline in these services over time.

5.2 Bilateral RCA Indices

For estimating Sri Lanka's competitiveness in services in Singapore, where tariffs are already zero, we estimate bilateral RCAs between Sri Lanka and exporters of services to Singapore.

The bilateral RCA indices are estimated by the following formula:

$$\frac{X_{i,a}/\sum_a X_{ia}}{\sum_a X_{i,a}/i\sum_a i,a}$$

First, we identify exporters of all disaggregated services to Singapore during the last 4 years. We then estimate the bilateral RCA indices for Sri Lanka vis-à-vis its competitors in Singapore in different service categories. The results of bilateral RCA indices are reported in Table 16 for the year of 2015. The table reports the results where Sri Lanka does not have a competitive edge over its competitors or exporters of services in Singapore.

Table 17 reports the results which show Sri Lanka's competitiveness over other exporters of services in Singapore.

5.3 Trade Complementarity Index: (TCI)

The trade complementarity index (TCI) provides useful information on how well imports and exports match two partner countries. The greater the match, the more is the probability of FTA leading to increase in bilateral trade.

The TC between countries k and j is defined as:

$$\mathrm{TC}_{ij} = 100\big(1 - \mathrm{sum}\big(\big|m_{ik} - x_{ij}\big|/2\big)\big)$$

where x_{ij} is the share of good/service i in global exports of country j and m_{ik} is the share of good/service i in all imports of country k. The index is zero when no goods/services are exported by one country and imported by the other and 100 when the export and import shares exactly match.

To assess which of the FTAs of Singapore have been successful in leading to greater match between the trade structures of the partner countries, we estimate TCI between Singapore and its partners with which Singapore has signed a FTA including services.

Table 16 Bilateral RCAs of Sri Lanka compared to exporters of services to Singapore in 2015 (Sri Lanka's non-competitiveness)

Travel services		Transport services		Other business services	
Vietnam	0.71	Korea Republic	0.98	Korea Republic	0.03
UAE	0.79	Denmark	0.55	India	0.02
Australia	0.77	Norway	0.75	Denmark	0.06
Cambodia	0.59	UAE	0.87	Norway	0.02
New Zealand	0.74	Panama	0.68	Switzerland	0.04
Saudi Arabia	0.67	*Insurance services*		Italy	0.03
Thailand	0.63	Switzerland	0.3	Indonesia	0.03
Malaysia	0.92	Italy	0.93	Belgium	0.02
South Africa	0.85	Germany	0.54	Japan	0.03
Indonesia	0.96	Saudi Arabia	0.88	Hong Kong, China	0.06
Financial services		USA	0.71	Australia	0.05
Norway	0.79	France	0.69	Cambodia	0.27
Switzerland	0.21	United Kingdom	0.23	China	0.03
Italy	0.92	*Construction services*		Germany	0.02
Belgium	0.67	Korea Republic	0.07	New Zealand	0.08
Japan	0.63	Denmark	0.17	Canada	0.02
Hong Kong, China	0.22	Norway	0.91	Philippines	0.01
Australia	0.66	Indonesia	0.55	USA	0.04
Germany	0.46	Belgium	0.3	Panama	0.16
Canada	0.4	Japan	0.14	Thailand	0.05
USA	0.33	China	0.16	Netherlands	0.03
Panama	0.83	Netherlands	0.52	Malaysia	0.04
South Africa	0.70	Malaysia	0.33	Taipei, Chinese	0.01
France	0.77	Taipei, Chinese	0.92	South Africa	0.05
United Kingdom	0.16	France	0.88	France	0.02
Telecommunications, computer and information services		India	0.99	United Kingdom	0.02
India	0.34	Switzerland	0.95		
Switzerland	0.98				
Netherlands	0.53				

Source Indices based on ITC, trade map database

Table 17 Bilateral RCAs of Sri Lanka compared to other exports in Singapore in 2015 (Sri Lanka's competitiveness)

Travel		Transport services		Telecommunications, computer and information services	
Korea Republic	2.98	Switzerland	3.32	New Zealand	3.0
India	3.46	Italy	2.27	Canada	1.3
Denmark	4.32	Indonesia	2.08	Saudi Arabia	7.2
Norway	3.81	Belgium	1.53	Philippines	1.0
Switzerland	3.15	Japan	1.5	United States of America	2.4
Italy	1.17	Hong Kong, China	1.15	Panama	4.8
Belgium	4.39	Australia	3.2	Thailand	17.0
Japan	2.96	Cambodia	2.91	Malaysia	1.6
Hong Kong, China	1.35	China	2.44	Myanmar	8.5
China	1.17	Germany	1.59	Taipei, Chinese	3.5
Germany	3.19	New Zealand	2.51	South Africa	3.3
Canada	2.26	Canada	2.15	France	1.8
Philippines	2.49	Saudi Arabia	1.67	United Kingdom	1.6
USA	1.86	Philippines	4.81	*Construction*	
Panama	1.25	USA	2.77	Italy	1.73
Netherlands	7.23	Thailand	3.49	Hong Kong, China	2.9
Myanmar	1.22	Netherlands	1.64	Australia	3.4
Taipei, Chinese	1.84	Malaysia	2.82	Cambodia	3.77
France	2.5	Myanmar	6.12	Germany	1.12
United Kingdom	3.79	Taipei, Chinese	1.8	Canada	2.34
Financial services		South Africa	2.01	Philippines	4.47
Korea Republic	2.43	France	1.79	USA	3.5
Vietnam	2.7	United Kingdom	2.79	Thailand	1.08
India	1.16	*Telecommunications, computer and information services*		South Africa	7.13
Denmark	3.57	Korea Republic	3.4	United Kingdom	1.79
Indonesia	3.33	Vietnam	10.1	*Insurance services*	
Cambodia	4.66	Denmark	2.1	Korea Republic	2.66
China	4.87	Norway	2.5	Vietnam	3.8
New Zealand	1.22	Switzerland	1.0	India	1.46
Saudi Arabia	2.29	Italy	1.6	Denmark	5.15
Philippines	2.71	Indonesia	2.7	Norway	2.21
Thailand	11.85	Belgium	1.3	Indonesia	15.39

(continued)

Table 17 (continued)

Travel		Transport services		Telecommunications, computer and information services	
Netherlands	1.53	Japan	6.4	Belgium	1.27
Malaysia	3.88	Hong Kong, China	5.0	Japan	1.91
Taipei, Chinese	1.84	Australia	3.1	Hong Kong, China	1.48
Transport services		Cambodia	8.6	Australia	2.16
Vietnam	1.6	China	1.5	Cambodia	16.73
India	3.57	Germany	1.1		

Source Indices based on ITC, trade map database

In total, Singapore has launched 33 FTAs of which 18 are into effect (ASEAN FTA, ASEAN-Australia and New Zealand FTA, ASEAN-India CECA, ASEAN-Japan CECP, ASEAN-People's Republic of China CECA, ASEAN-Korea CECA, European Free Trade Association-Singapore FTA, Gulf Cooperation Council-Singapore FTA, India-Singapore CECA, Japan-Singapore Economic Agreement for a New-Age Partnership, New Zealand-Singapore Closer Economic Partnership, China-Singapore CECA, Singapore-Australia FTA, Singapore-Costa Rica FTA, Singapore-Panama FTA, Singapore-Peru FTA, Singapore-Taipei, China FTA, Trans-Pacific Strategic Economic Partnership, USA-Singapore FTA, Korea-Singapore FTA). 2 FTAs are signed but not in effect (Singapore-Turkey FTA, TPP), 11 negotiations launched (ASEAN-Hong Kong, China Free Trade Agreement, Canada-Singapore FTA, Comprehensive Economic Partnership Agreement between Singapore and Sri Lanka, Pakistan-Singapore Free Trade Agreement, RCEP, Singapore-Egypt CECA, Singapore-EU FTA, Singapore-Mexico FTA, Singapore-Ukraine FTA) and 2 FTAs have been discontinued (Singapore-Bahrain FTA and Singapore-Jordan FTA). Out of these FTAs, we estimate Singapore's TCI with India, Japan, China and Korea post-FTA, to assess whether the FTAs have led to an increase in TCI between the two countries.

The TCI of Singapore with its partner countries post-FTA in different service categories for the available data is estimated and reported in Table 18. The results show that TCI has in fact declined between Singapore and India and Singapore and China post-FTAs for transport services. Overall, the results show that the only country with which Singapore's TCI has improved over the years post-FTA is Korea. This implies that Korea-Singapore FTA can be considered as a successful model for FTAs in services.

Table 18 TCI of Singapore with FTA partners in different Services

TCI for transport services				
Countries	*2011*	*2012*	*2013*	*2014*
India	99.9	99.8	99.1	99.3
Japan	91.3	91.3	93.3	93.6
China	93.6	95.2	94.1	93.2
Korea	88.2	87.0	91.3	90.5

TCI for financial service		
Countries	*2013*	*2014*
India	98.2	98.2
Japan	99.2	99.5
China	99.0	99.0
Korea	99.2	99.9

TCI for insurance and pension service		
Countries	*2013*	*2014*
India	96.8	98.0
Japan	98.7	98.3
China	99.8	99.8
Korea	97.9	99.2

TCI for construction service		
Countries	*2012*	*2013*
India	98.8	99.2
China	99.9	99.96
Korea	99.8	99.9

TCI for telecommunication, computer and information services				
Countries	*2011*	*2012*	*2013*	*2014*
India	94.0	94.5	93.8	92.6
Japan	99.1	99.2	98.9	99.0
China	100.0	100.0	99.6	98.8
Korea	99.0	99.2	99.7	99.8

6 Korea-Singapore FTA—A Success Story in Services FTA

Korea-Singapore Free Trade Agreement (KSFTA) is the first trade agreement that Korea entered with an ASEAN country. The negotiations were commenced in January 2004; after several rounds of tough negotiations, it was concluded in March 2006.

One of the major strategies in the promotion of KSFTA for Korea was to use the external stimulus from Singapore to "strengthen competitiveness" (restructuring

and liberalisation) of its services industry. From Korean prospective, services liberalisation and cooperation were the key elements for entering into this agreement. Since Singapore applies 0% tariff for 99.9% of its products, the Korean government promoted the agreement with an expectation to increase services trade and push for more liberalisation in the services sector.

There are several factors attributed to the success of Korea-Singapore FTA in the services sector. The services negotiations under KSFTA were better placed compared to many other agreements with Singapore. Some of the major commitments and other distinct features under the KSFTA agreements are listed below.

- KSFTA's services commitments are based on a negative-list approach, where all sectors are a priori committed except for those sectors or measures listed down in Annex 9 of the FTA. Trade in financial services receives a separate treatment. The FTA extends the positive list of sub-sectors to investment in financial services and allows parties to determine the level of openness in each sub-sector through a hybrid list approach. In other words, the Korea-Singapore FTA fully adopted the GATS approach for the scheduling of financial services commitments. The only FTA which followed a complete negative listing of sectors for Singapore is Australia-Singapore FTA. Similarly, Singapore-Panama FTA and Singapore-US FTA also followed a negative listing of sectors except for the cross-border trade in financial services. Singapore's other FTAs such as India-Singapore ECA, Japan-Singapore EPA, EFTA-Singapore FTA, Jordan-Singapore FTA and New Zealand-Singapore FTA followed a positive listing of sectors, in which parties have agreed and expressed their interest in sectors subject to market opening measures.
- KSFTA significantly improved on GATS commitments by eliminating a broad horizontal restriction on ownership and control of Korean companies. In addition, Korea has made FTA commitments for Mode 1 and Mode 2 in a significant number of sub-sectors which remain "unbound" under the GATS. Corresponding to Mode 1 and Mode 2, services discipline applies to the services that are supplied "from or in the territory of another country". While India-Singapore ECA and Japan-Singapore EPA have the provision of denying one party the benefits of the services chapter if one of the parties observes that the services are supplied "from or in the territory of another party". But this provision is not applicable in the Singapore-Korea FTA.
- Korean companies have tried to use Singapore as a gateway to Southeast Asia, Middle East and East Asia. Many services providing companies have established Singapore as the regional headquarters for Asia. For example, the Korean Airlines and SK corporations have designated Singapore as their regional headquarter.
- The agreement includes the new sectoral disciplines such as electronic commerce, telecommunications services and lifestyle services in the agreements. For example, in the area of lifestyle services, Korea has offered a significant consumer market for the Singapore-based companies and occupied spaces offered in hotels, malls and markets. Effective steps have been taken to increase trade in telecommunication and information services over the years. Data reveal that Korea's export

to Singapore in telecommunication and information services has increased by more than 300% during the period 2011–2014, i.e. from $35 million in 2011 to over $145 million in 2014.

- In the FTA, each party provided other party treatment no less favourable than its own services and service providers. Korea allowed easy access to Singapore's education, logistic and environmental services. On the other hand, Korea's services providers got easy access in Singapore's construction, logistics and professional services market.
- The immigration measures are dealt exclusively by the movement of natural person (MNP) chapter, thus providing a clear guideline to the 'immigration measures' by both countries. Among Singapore's other FTAs, Singapore-US FTA also deals in the immigration measures by the MNP chapter. Both Singapore-Korea and Singapore-USA FTA followed the NAFTA definition of movement of natural person, in which disciplines on cross-border trade in services apply to services supplied "*by a national of a Party in the territory of the other Party*". In contrast, other FTAs such as Australia-Singapore FTAs and Panama-Singapore FTAs follow the GATS definition of movement of natural person.
- In principle, an agreement to recognise the professional qualifications of individuals from one particular country may depart from an FTA's MFN obligation. But the Korea-Singapore FTA does not feature a binding MFN obligation, while many East Asian FTAs have established a binding MFN obligation. Other FTA measures which do not include a binding obligation include India-Singapore ECA and Japan-Singapore EPA.

  The agreements featured the binding commitments to recognise the professional qualifications of engineers obtained from 20 Korean universities (for Singapore) and 2 Singaporean universities (for Korea).
- In case of the origin of the judicial person, there is no limitation to the domestically owned or controlled service suppliers. This is also applied in other FTAs such as Australia-Singapore FTA, Panama-Singapore FTA, Jordan-Singapore FTA, Japan-Singapore FTA, NZ-Singapore, Singapore-US FTA and TPP. On the other hand, in case of India-Singapore EPA, it provides substantive business operations test for party-owned or controlled service suppliers. But it is limited to services supplied through commercial presence and investment disciplines.
- The KSFTA agreement provides no substantive business operations test for party-owned or controlled service suppliers. But in case of India-Singapore EPA, it can be denied in case the judicial person is owned or controlled by person of a denying party. Similarly, there is a more restrictive nature of agreement adopted in case of India-Singapore ECA which limits the benefits of FTAs to domestically owned or controlled firms. In other words, the domestic ownership and control is a prerequisite for services supplied through commercial presence and to the agreement's investment discipline.
- KSFTA improved the commitments in education sector, such as language education, certified language programmes such as TOEFL and TOEIC, corporate training and service quality programmes for the Singapore companies.

- It opened the environmental services market in the areas of environmental testing and assessment services, industrial waste treatment and refuse disposal services, and recycling services.
- It engaged the contract manufacturer in the services that support the communications equipment, machinery (computing, electrical, office), medical precision and optical instruments, plastics and rubber products.
- Singapore service suppliers are given access to Korea's courier services sector to complement each other as hubs in their respective regions for courier and logistics services.

These measures coupled with speedy implementation of commitments by both parties have increased the service trade between them significantly over the years. As per the latest available data, Korea's services export to Singapore increased from US$1.8 billion in 2011 to 2.6 billion by the end of 2014, registering a growth by over 45% during this period.

7 Conclusion

Sri Lanka's export capacity has shown a weakening trend over the years. Sri Lanka's global exports grew at an average of around 8.3% during the 2002–2011 period, but slowed down to an average annual growth of around 0.8% during the 2012–2015 period. Predominant reasons for Sri Lanka's sluggish export performance have been the steady decline in commodity exports; an export basket that has remained largely unchanged over the years; and undiversified export markets. Sri Lanka's export basket remains concentrated in textiles and garments, tea and rubber products (collectively accounting for a share of around 67% of Sri Lanka's total exports), with the country's exports being primarily directed to three export markets USA, UK and EU (collectively accounting for over 65% of its global exports). The need to boost export revenue by diversifying the country's export basket and export markets remains more important than before. Free trade agreements can play an important role in terms of improving Sri Lanka's market access as well as linking it into global value chains. The services trade of Sri Lanka needs an urgent push in order to generate employment as well as diversify its export basket and destinations.

The study shows that well-negotiated FTAs with China and Singapore and a deepened agreement with India can increase Sri Lanka's exports by 56% in total into these three countries, with exports increasing by 74% into India and 31% into China. Imports will also rise by around 10%. Further, 22 new products have been identified which Sri Lanka can export to these countries, where the global imports of these countries amount to $21 billion of which Sri Lanka has the potential of exporting around $1.8 billion.

With respect to services trade, analysis has been conducted for Sri Lanka's trade with Singapore. Singapore offers a zero duty tariff regime for its products; gains therefore are expected in terms of rise in services exports to Singapore. Sri Lanka's competitive services in Singapore have been identified along with the weak competitors in Singapore. Korea-Singapore FTA in services has been identified as a model which can be emulated by Sri Lanka as this FTA has led to maximum rise in Korea's exports to Singapore and has many different provisions as compared to the existing FTAs of Singapore with other countries.

Chapter 11
Facilitating Trade Between India and Sri Lanka

Suwendrani Jayaratne and Janaka Wijayasiri

1 Introduction

Trade between India and Sri Lanka changed significantly with the India-Sri Lanka Free Trade Agreement (ISFTA) coming into operation in March 2000. Total trade between the two countries has grown sevenfold during the past 14 years, and India is now the largest trading partner and a main source of Foreign Direct Investment (FDI) for Sri Lanka. For India, Sri Lanka was the largest trading partner in SAARC as well as the largest export market in the South Asian region in 2014.

While overall trade has increased post-ISFTA, it is often highlighted by the Sri Lankan side that the full potential of the agreement has not been reaped. Sri Lanka's utilization of the ISFTA for its exports has been declining and now stands at 65%. At the same time, a bulk of exports from India to Sri Lanka remains outside the ISFTA and the utilization rate of the ISFTA by Indian exporters remained as low as 13% in 2013. In 2012, it was just above 4%. Constraints to trade under the ISFTA and the inability of the countries to reap the full benefits of the agreement are due to: non-tariff barriers; TF issues; lower prospects for vertical integration; quotas on major Sri Lankan exports; and stringent rules of origin criteria (Kelegama 2014; Weerahewa 2009).

Trade facilitation (TF) is increasingly being recognized as key to unlocking gains from international trade. TF refers to, "*the simplification and harmonisation of international trade procedures including import and export procedures*", where "procedures" are largely attributed to the activities (practices and formalities) involved in

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collecting, presenting, communicating and processing the data required for movement of goods in international trade (European Commission 2015). It emphasizes the need for coordination at the border and coordination between the entry and exit posts between border countries and includes all stages (buy-ship-pay stages) of the trading process.

Benefits of TF are many and well documented (Wilson et al. 2004; Duval 2006; OECD 2005). In the short-medium term, TF can improve trade competitiveness, foreign direct investment, increase participation of SMEs and improve growth prospects (ADB and the UNESCAP 2013). Further, benefits can be accrued to both governments and traders. Identifying the importance of TF in trade policy, the provisions on TF in recent trade agreements have also improved. However, TF is addressed to a bare minimum in the ISFTA.

In this background, this chapter looks at the TF issue facing traders in Sri Lanka when exporting under the ISFTA. Given the significance of improving bilateral trade with India, this chapter aims at identifying these issues and potential means of improving the identified areas. Section 1 will give a brief introduction to the ISFTA, and Sects. 2 and 3 will present an overview of trade and investment between India and Sri Lanka pre- and post-ISFTA, respectively. Section 4 provides a brief description of the methodology, Sect. 5 examines the current status of TF in the two countries, and Sect. 6 provides an analysis of how TF is addressed in the ISFTA. This is followed by a discussion of the facilitation issues faced at the Sri Lankan side as well at the Indian side when trading under the agreement. The last section provides policy recommendations.

2 India-Sri Lanka Free Trade Agreement (ISFTA)

ISFTA which was signed on 28 December 1998 entered into force with effect from 1 March 2000. At the time of signing ISFTA, it was the first bilateral free trading agreement signed by both parties and aimed at promoting economic links between India and Sri Lanka through the enhancement of bilateral trade and investment. The agreement covers trade in goods and requires the two countries to offer market access for each other's exports on a duty-free basis and concessionary tariffs (ADB 2013).

Learning that the positive approach adopted in the South Asian Preferential Trade Agreement (SAPTA) signed in 1995 failed to enhance trade within the region as expected, the ISFTA adopted a *negative list approach* to trade liberalization. All items that were deemed sensitive by each country were categorized under the negative list excluding them from the *tariff liberalization programme*. Apart from the product items that came under this list, all tariff lines were subjected to zero-duty at the end of implementation. Sri Lanka has 1180 items (reduced from 1220 items in 2000) on the negative list while India maintains 429 (at HS six-digit level) items on the list. Apart from the list of items named by either country that would enjoy immediate duty-free concessions (319 items for Sri Lanka and 1351 items for India), under the *tariff liberalization programme* India and Sri Lanka were given 3 years and 8 years,

respectively, to completely enforce zero-duty, so as to give enough time for the domestic firms to adjust to shocks that would result from trade liberalization. Sri Lanka was given additional years to open up in recognition of asymmetries between the two countries. Further, to ensure that products of third countries do not enter either Sri Lanka or India, both countries are required to produce proof of origin, or *Rules of Origin* (RoO). However, if there is a need of third country products to manufacture a certain product, this procedure requires substantial value addition to be done within the country prior to exporting it. ISFTA uses Domestic Value Addition (DVA) and Change of Tariff Heading (CTH) to determine its origin. In the case of certain items in the negative list in one country that are of export interest to the other country, *tariff rate quotas* are allowed. This system allows a certain pre-agreed proportion of the products to pass through customs with zero-duty.

3 Trade and Investment Between India and Sri Lanka

India, being one of the most dynamic and rapidly expanding economies with attractive market opportunities, has maintained strong relations with Sri Lanka due to its close proximity and historical links. Relations between Sri Lanka and India have matured and diversified over time, and now enjoy a vibrant and growing economic and commercial partnership. India is now Sri Lanka's largest trading partner globally, while Sri Lanka in turn is India's largest trading partner in the SAARC region. India is Sri Lanka's largest source of imports, accounting for approximately 18% of total imports in 2014 (Central Bank of Sri Lanka 2015). India is also Sri Lanka's third largest export destination after the USA and the UK, accounting for 5.6% of the total export value. By the end of 2014, the total value of bilateral trade had increased from USD 656 million in 2000 to USD 4.6 billion (Table 1). Examining trade data between India and Sri Lanka, it is evident that this rapid increase in economic interaction in the past decade followed the signing of ISFTA.

3.1 India-Sri Lanka Trade Prior to the ISFTA

India was an important trading partner in the South Asian region for Sri Lanka even prior to the implementation of ISFTA in 2000. India was the largest import source for Sri Lanka in the South Asian region accounting for 8.4% of the total imports in 1999. The exports to India however were not as significant prior to the ISFTA. Although India was the second largest export destination in the South Asian region after the Maldives for Sri Lanka, it accounted for only about 1.05% of Sri Lanka's total exports in 1999, with a total value of a mere USD 47 Million and India ranked at 16th place among the top exporting markets.

Table 1 Utilization of the ISFTA 2000–2013

Exports (US$ Mn.)				Imports (US$ Mn.)			
Year	Total exports to India	ISFTA exports	% under the ISFTA	Total imports from India	ISFTA imports	% under the ISFTA	Total value of bilateral trade
2000 Mar–Dec	55.6	8.6	16	600.0	53.9	9	655.6
2001	70.1	15.9	23	601.5	113.1	19	671.6
2002	168.8	114.2	68	834.7	81.7	10	1003.5
2003	241.1	238.8	99	1076.2	150.4	14	1317.3
2004	385.5	339.9	88	1358.0	394.7	29	1743.5
2005	559.2	543.0	97	1440.4	246.2	18	1999.6
2006	494.0	431.1	87	1822.07	459.3	25	2316.07
2007	516.4	398.2	77	2749.6	385.3	14	3266
2008	418.0	309.3	74	2848.4	541.4	18	3266.4
2009	324.8	218.5	67	1709.9	371.7	22	2034.7
2010	466.6	358.4	77	2546.2	573.7	23	3012.8
2011	521.5	391.5	75	4349.4	579.6	13	4870.9
2012	566.3	379.5	67	3517.2	156.4	4	4083.5
2013	543.3	354.8	65	3092.6	393.4	13	3635.9

Source EDB (2014)

As illustrated in Fig. 1, prior to ISFTA Sri Lankan exports to India mainly consisted of primary agricultural goods (pepper, cloves, nutmeg and mace, goraka, areca nuts) and unrefined metal (scrap alloy metal, copper scrap). The trade deficit between India

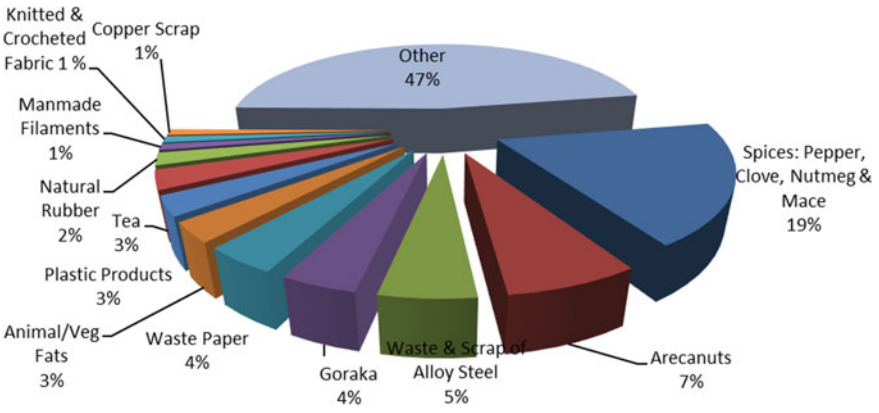

Fig. 1 Exports to India prior to the ISFTA in 1999. *Source* EDB (2014)

and Sri Lanka was substantial too, amounting to US$463 million in 1999 with an import: export ratio of 10.5:1 (de Mel 2008).

FDI from India to Sri Lanka also remained limited prior to the launch of the ISFTA, with a cumulative investment of only SLR 165 million as of 1999 accounting for 1.3% of the total FDI. In 1999, Indian investment in Sri Lanka was limited to food, beverages, tobacco, chemical, petroleum, rubber, and plastic products.

3.2 India-Sri Lanka Trade Post-ISFTA

Since the implementation of the ISFTA, there has been a significant increase in trade between the two countries. Even after a significant drop in trade in 2009 due to the world economic downturn, trade between the two countries rapidly picked up hitting a peak in 2011 (Fig. 2).

With the implementation of the ISFTA, by 2005 there had been a significant diversification of exports to India from Sri Lanka, amounting to approximately USD 559.2 million in 2005 compared to USD 47 million in 1999. More importantly, by 2005 Sri Lanka shifted from mainly exporting primary goods such as spices and unrefined metal to processed goods such as insulated wires and cables, vegetable oils and fats (*Vanaspathi*), refined copper ingots, articles of stone, plaster, cement, margarine, rubber and articles thereof. As illustrated in Fig. 3, new products such as furniture, antibiotics and ceramic products also were successfully able to enter the Indian market (EDB 2014).

Fig. 2 Sri Lanka's trade with India 2000–2014 (US$ Mn.). *Source* EDB (2014), CBSL (2015)

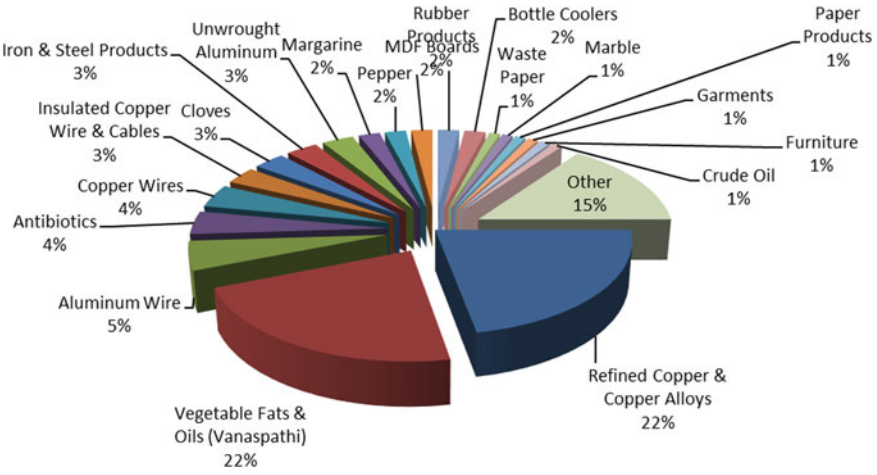

Fig. 3 Exports to India after the ISFTA: 2005. *Source* EDB (2014)

Although these aggregate values reflected positively in terms of export growth in Sri Lanka to India, upon closer analysis one would observe that this might not necessarily be the case. Although seemingly there has been an increase in the total export value and diversification, almost 50% of the exports were accounted for by only two product lines; namely vegetable fats and oil (*Vanaspathi*), and copper and copper-related products. However, these products performed well not due to comparative advantage Sri Lanka had but due to short-term tariff arbitrage. Later, with India reducing import taxes on food imports including palm oil and changing the invoicing methods for copper exports, there was a drop in the total value of exports of these products after 2006 (Kelegama 2014).

However, looking at Sri Lanka Customs data one would observe that Sri Lanka has managed to find other products that performed well in the Indian market other than the products that were traditionally exported including, ships, boats and floating structures, animal feed, apparel, insulated wires, cables, paper and paper products, natural rubber and rubber products, furniture etc., fibreboard of wood, copper and copper-based products (Fig. 4). Tables 2 and 3 show the top 10 Sri Lankan export and import products, respectively, in 2013 as far as trade with India is concerned.

In terms of imports to India, it is also interesting to observe, as shown in Fig. 2, that the total imports from India have more than doubled by the end of 2013 compared to the inception of the ISFTA in 2000. Comparatively, total exports to India from Sri Lanka have grown at a slower rate, resulting in a widening trade deficit for Sri Lanka. This may be due to the lack of productive export capacity in Sri Lanka to satisfy the requirements of the significantly larger Indian economy, the competitiveness of Indian products in the market and, competition from other emerging economies to capture market share in the Indian market. Another factor that may have contributed to the limited export potential to India is that the Indian market is not a traditional

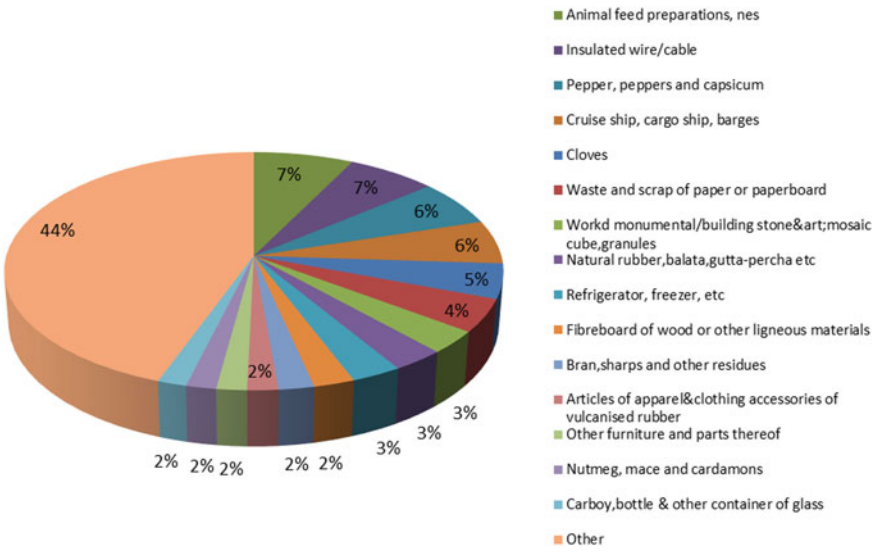

Fig. 4 Exports to India after the ISFTA: 2011–2013. *Source* ITC Database. http://www.trademap.org/Bilateral_TS.aspx

export market of Sri Lanka. Sri Lanka's traditional export markets have always been the USA and the EU, which are reasonably established markets with long-standing buyer-seller relationships and supply chains.

Another notable feature of trade between the two countries is the low utilization of the concessions offered under the ISFTA. While utilization of the ISFTA by Sri Lankan exporters has reduced to 65%, the share of exports from India to Sri Lanka that comes under the ISFTA has remained even lower, at 13%. This indicates that while more than 50% of Sri Lanka's exports to India come under the ISFTA, more than 50% of India's exports to Sri Lanka are done outside the ISFTA.

3.3 Investments Between India and Sri Lanka

Inbound investments from India to Sri Lanka grew strongly with the signing of the ISFTA. While in 1999, Indian investment in Sri Lanka was limited to food, beverages, tobacco, chemical, petroleum, rubber, and plastic products, a few years into the ISFTA investments from India in Sri Lanka expanded to include services, fabricated metal products, machinery and transport equipment, manufactured products, and non-metallic mineral products by 2005. During this period, a significant proportion of all investments was accounted by the vegetable fats and oil (*Vanaspati*) and copper metal sectors. This was mainly due to a number of Indian manufacturers investing

Table 2 Sri Lanka's top 10 exports to India: 2012–2014 (US$1000)

	Product code HS 4 digit	Product label	Sri Lanka's exports to India 2012–2014
			Total value
	Total	All products	132,224
1	'0904	Pepper, peppers and capsicum	125,849
2	'2309	Animal feed preparations, nes	107,740
3	'8901	Cruise ship, cargo ship, barges	93,134
4	'8544	Insulated wire/cable	84,141
5	'0802	Nuts nes	77,257
6	'4707	Waste and scrap of paper or paperboard	70,760
7	'2710	Petroleum oils, not crude	54,176
8	'0907	Cloves	50,646
9	'6802	Worked monumental/building stone and art; mosaic cube, granules	38,156
10	'6006	Fabrics, knitted or crocheted, of a width of >30 cm (excl. warp knit fabrics "incl. thos")	29,982

Source ITC database. http://www.trademap.org/Bilateral_TS.aspx

heavily in Sri Lanka to take advantage of the low external tariffs on their principal inputs and the preferential entry into the Indian market from Sri Lanka. By 2013, these investment avenues further diversified to include investments in petroleum retail, hospitals, telecom, real estate development, telecommunication, hospitality and tourism, banking and financial services, IT and food processing sectors as well (ADB 2013). In 2012, India was the fourth largest overall investor in Sri Lanka after Hong Kong, UAE and China with cumulative investments over USD 800 million since 2003 (Table 4).

Since the 1990s, investment from Sri Lanka to India has risen though the flows are small in terms of value. Sri Lankan investments in India that have increased were in garments, confectioneries, hotels, furniture, freight servicing and logistics, with the participation from some of Sri Lanka's top blue-chip companies.

Table 3 Sri Lanka's top 10 imports from India in 2012–2014

	Product code HS 4 digit	Product label	Sri Lanka's imports from India
			Value USD thousand
	Total	All products	10,620,489
1	'2710	Petroleum oils, not crude	1,611,778
2	'2523	Cements, Portland, aluminous, slag, supersulfate and similar hydraulic	638,301
3	'3004	Medicament mixtures (not 3002, 3005, 3006), put in dosage	475,981
4	'8703	Cars (incl. station wagon)	442,124
5	'8711	Motorcycles, side-cars	432,293
6	'8704	Trucks, motor vehicles for the transport of goods	426,085
7	'1701	Cane or beet sugar and chemically pure sucrose, in solid form	359,113
8	'5209	Woven cotton fabrics, 85% or more cotton, weight over 200 g/m^2	251,947
9	'1006	Rice	231,769
10	'6006	Fabrics, knitted or crocheted, of a width of >30 cm (excl. warp knit fabrics "incl. thos")	229,191

Source ITC database. http://www.trademap.org/Bilateral_TS.aspx

Table 4 Main source of investors in Sri Lanka

Rank	2008	2009	2010	2011	2012
1	Malaysia	Malaysia	India	Mauritius	Hong Kong
2	India	UK	Malaysia	India	UAE
3	Netherlands	India	UAE	Hong Kong	China
4	UK	Netherlands	UK	Malaysia	India
5	Luxembourg	Hong Kong	Singapore	British Virgin Island	Singapore
6	Hong Kong	Luxembourg	Hong Kong	Singapore	Mauritius
7	USA	Singapore	Netherlands	UAE	Netherlands
8	Sweden	USA	Mauritius	UK	Malaysia
9	China	Sweden	USA	Netherlands	UK
10	Singapore	China	Japan	Japan	Luxembourg

Source IAuthors

4 Methodology

In order to evaluate the current status of TF in the two countries and to find TF-related issues affecting Indo-Lanka trade, the chapter used both secondary data/literature and primary information gathered through interviews. Key informant interviews were carried out in 2015 and included firms and representatives of key institutions involved in the trading process. The firms interviewed were importers/exporters of the top products that are currently traded between the two countries. As such the sectors fruits, rubber, furniture, cement and textiles were chosen. Interviews were also carried out with representatives from the Sri Lanka Customs, Department of Commerce (DOC) of Sri Lanka, Sri Lanka Standards Institute, SAARC Chamber of Commerce and Industry, National Chamber of Commerce and the Joint Apparel Association Forum.

5 Trade Facilitation in India and Sri Lanka and the ISFTA

5.1 Trade Logistics Performance of Sri Lanka and India

Sri Lanka's trade logistics performance has been commendable over the years, with the country outperforming its South Asian neighbours in several logistics performance indicators. According to World Bank's *Trading Across Borders* (*TAB*), which capture the time and cost associated with exporting and importing a standardized cargo of goods by sea transport, Sri Lanka was ranked 69 in 2014 (out of 189 economies) and is the best-performing country in the region. It ranked at 85 the previous year. India. On the other hand, ranks at 126, behind Sri Lanka and Pakistan (rank-108) in the South Asian region.

According to TAB figures, it now takes 16 days to export from Sri Lanka, compared to 17.1 days from India (South Asian average is 33.4); and 13 days to import in Sri Lanka compared to 21.1 days in India (South Asian average is 34.4). Cost of exporting out of India and importing into India is more than two times the cost in Sri Lanka but is lower than the average for South Asia (Table 5).

The breakdown of time taken to complete the export procedures in both countries show that the cost of inland transport and handling, the cost of document preparation and port handling is relatively higher in India (Table 6). However, customs clearance costs of export products are higher in Sri Lanka. In importing too, customs clearance and inspections costs are higher in Sri Lanka. Nevertheless, the import documentation cost in India is much higher than Sri Lanka—almost three times the cost in Sri Lanka, while ports and handling charges are also about 1.5 times more than that of Sri Lanka.

Sri Lanka's score in the World Economic Forum's *Enabling Trade Index* suggests that the country is leading in South Asia in terms of the number of days and documents to import and export, and cost to export (Table 7). However, it lags behind both India and Pakistan in terms of efficiency and transparency of border administration, and the

Table 5 Time, cost and documentation needs to trade: Sri Lanka and India, 2014

Indicator	India	Sri Lanka
Export		
No. of documents	7	7
Time to export (days)	17.1	16
Cost to export (US$ per container)	1332	560
Import		
No. of documents	10	7
Time to import (days)	21.1	13
Cost to import (US$ per container)	1462	690
Rank	126	69

Source World Bank (2014)

Table 6 Time and cost breakdown

Nature of export/import procedure	Export		Import	
	Duration (days)	Cost (US$ per container)	Duration (days)	Cost (US$ per container
Sri Lanka				
Documents preparation	9	135	7	140
Customs clearance and inspections	2	160	2	285
Ports and terminal handling	3	150	2	150
Inland transportation and handling	2	115	2	115
Total	16	560	13	690
India				
Documents preparation	8	365	8	400
Customs clearance and inspections	2	130	4	200
Ports and terminal handling	3	225	5	250
Inland transportation and handling	3	400	3	400
Total	16	1,120	20	1,250

Source World Bank (2014)

Table 7 Enabling trade index 2014: South Asia

Enabling trade scores 2014	Sri Lanka	India	Pakistan	Bangladesh	Nepal
Efficiency and transparency of border administration (1–7)	**4.0**	**4.2**	**4.3**	**3.2**	**3.1**
Customs services index (0–1)	0.23	0.56	0.64	0.35	0.36
Efficiency of clearance process (1–5)	2.6	2.7	2.8	2.1	2.3
No. of days to import	17	20	18	35	39
No. of documents to import	7	11	8	8	11
Cost to import (US$ per container)	775	1,250	725	1,470	2,400
No. of days to export	20	16	21	25	42
No. of documents to export	5	9	8	6	11
Cost to export (US$ per container)	595	1,270	660	1,075	2,295
Irregular payments in exports and imports (1–7)	2.4	2.7	2.6	2.0	2.3
Time predictability of import procedures (1–7)	3.8	3.4	3.5	3.1	3.3
Customs transparency index (0–1)	0.70	1	0.8	0.38	0.73
Availability and quality of transport infrastructure (1–7)	3.6	4.3	3.4	2.3	2.3
Available int'l airline seat km/week, millions	271.4	1,820.7	321.3	198.8	83.8
Quality of air transport infrastructure (1–7)	4.8	4.8	4.1	3.2	3.0
Quality of railroad infrastructure (1–7)	3.6	4.8	2.5	2.4	1.1
Liner shipping connectivity index (0–157.1)	43.0	44.4	27.7	8.0	n/a
Quality of port infrastructure (1–7)	4.2	4.2	4.5	3.5	2.7
Paved roads (% of total)	25.9	49.5	72.2	9.5	53.9
Quality of roads (1–7)	4.7	3.6	4.0	2.8	2.7
Availability and quality of transport services (1–7)	3.9	4.3	3.9	3.6	3.4
Enabling trade index 2014 rank	84	96	114	115	116

Note (a) 1–5 Best, (b) 0–100 Best, (c) 1–7 Best
Source World Economic Forum (2014)

availability and quality of transport services. Sri Lanka is also behind India in terms of availability and quality of transport services, suggesting that there is much more room for improvement. India performs better in the quality of transport infrastructure.

The main documentation required for the two countries in the export/import process is 5–6 documents (Table 8). However, there are product-specific certification and documentation needs. Furthermore, in obtaining the Certificate of Origin, an

Table 8 Common documentation required for exporting and importing under ISFTA

Exports	Imports
1. Customs declaration (CUSDEC)	1. CUSDEC
2. Shipping note/airway bill	2. The commercial invoice
3. Invoice	3. Delivery order (DO)
4. Certificate of origin	4. Bill of lading (BL)
5. Packing list	5. Packing list
6. Product specific documents such as the certificate of analysis/SPS certification for rubber exports, labelling requirements (buyer dependent)	6. Certificate of origin
	7. Product-specific documents such as a certificate of analysis for pharmaceuticals

exporter in Sri Lanka has to produce (i) a qualifying document (value addition criteria, product-specific criteria like raw material sourcing criteria, production process, etc.), (ii) affidavit given by the exporter (for wholly obtained product), (iii) a catch certificate (if the product is fish), and an (iv) approved cost statements (for value-added products; valid for 6 months–1 year).

6 Trade Facilitation in the ISFTA and Other Agreements of India and Sri Lanka

TF-related provisions are limited in the Indo-Sri Lanka FTA. Provisions relating to consultation on rules of origin and institutional mechanisms for appeal procedures are included in the agreement. India and Sri Lanka have also established an Arbitration Tribunal for binding decisions on origin. Apart from the above, provisions in other areas of trade facilitation under the ISFTA are more or less non-existent. There are no chapters dedicated to TF. The agreement does not make provisions on publication and availability of information: specifications are not made on publishing trade regulation, Internet publication, notification of trade regulation, establishment of enquiry points/Single National Focal Points or other measures to enhance availability and exchange of information. Furthermore, specifications on the time between publication of new regulations and the time it comes into force are also not stated. Apart from the Arbitration Tribunal, the agreement does not specify other measures that can be undertaken to enhance impartiality, non-discrimination and transparency.

ISFTA also does not have provisions on the fees and charges related to importing/exporting—there are no provisions or guidelines on the general discipline on fees and charges, reduction in the number and diversity of fees and charges, publication/notification of fees and charges, their periodic review or other related measures.

Formalities/procedures and data/documentation requirements, the reduction of formalities and documentation, the use of international/regional standards or provisions on commercially available information are also not included. It does not propose or state the role of automation in the process or on working towards a single window. Similarly, the TF measures on the release and clearance of goods which is key in trading, has not been included in the agreement. Therefore, procedures on pre-arrival clearance, expedited procedures for express shipments, application of risk management techniques, and other measures related to the clearance of goods that remain are not outlined in the ISFTA. Exchange and handling of information, customs valuation and harmonization/standardization are also not addressed in the agreement.

7 Findings

7.1 Trade Facilitation Issues Faced at the Sri Lankan End in Exporting to India

Apart from the Sri Lanka customs, ports and the BOI, other supporting and facilitating agencies that are involved in the trading process are not automated. Exporters highlighted that none of the procedures at the DOC are automated, with certification and other documentation still carried out manually, i.e. issuance of the Certificate of Origin (CoO). DOC is the only authority in Sri Lanka that can issue CoOs for all preferential schemes including the ISFTA, while the Chambers of Commerce can issue CoOs for non-preferential cargo. DOC has a "Green Channel" facility for the issuance of GSP certificates, where the issuing time is a minimum; CoOs are issued within 1–2 h whereas for general customers it takes about 3–4 h. However, this is not available for other preferential schemes yet. For the Green Channel customers, the CoOs are issued within 1–2 h whereas for general customers it takes about 3–4 h. According to the DOC, it plans to automate the process of issuing the CoO soon. Chambers (i.e. Ceylon Chamber of Commerce and the National Chamber of Commerce), which issue CoOs for non-preferential cargo on the other hand, have embraced technology/automation more extensively, allowing exporters to submit and obtain certificates and other documentation online.

Documentation delays. Because of the close geographical proximity between the two countries, cargo shipped from India usually arrives in Sri Lanka within 24–48 h. However, documentation from India takes longer to arrive in Sri Lanka, with delays sometimes attributed to bureaucracy and red tape barriers at the Indian end. As a result, importers in Sri Lanka cannot produce the original documentation required by the SLC to clear the cargo and have to incur additional costs to get bank guarantees/shipping guarantees to clear the goods.

When importing small consignments, delays take place due to capacity issues at the Colombo port. As a result, there is a delay in de-stuffing in Sri Lanka, sometimes taking up to 7 days to de-stuff a container.

The standard and quality requirements for products that are being imported into the country are set by different organizations that handle specific areas. For example, food quality standards and regulations for imported food items are set by the Food Authority of Sri Lanka; cosmetics, pharmaceutical standards and regulations are set by the Health Ministry and Drug Regulatory Authority of Sri Lanka. As a result, importers have to visit different agencies to get relevant information and approvals.

7.2 Issues Faced at the Indian End When Exporting from Sri Lanka

Lack of border control mechanism and lack of transparency/information sharing with the relevant authorities and persons in India have led to considerable delays in shipping, logistics, thereby reducing exports and export competitiveness. Given that border control systems are not online, limits information sharing and this has often led to delays and complications, i.e. different ports demand different sets of documentation. The Indian ports are hardly automated and are not linked. Hence, the need to get clearance from multiple controllers at sea as well as land borders was identified by some exporters to be one of the main hindrances to free movement of goods under the ISFTA. Traders are of the view that the Sri Lanka Customs and Ports controls are comparatively much more streamlined.

Unawareness of customs officials of products and product category which receive ISFTA concessions was identified to be one of the main issues confronting some of the exporters. Some Indian customs officials are not fully aware of some of the goods and what HS code they should fall under, resulting in having to pay additional duties. There is a lot of paperwork and red tape in the customs which inevitably leads to delays and corruption and smuggling of products.

Non-acceptance of Sri Lankan standard certification at the Indian end has led to delays and increased costs. According to the Sri Lanka Standards Institute (SLSI), they are looking at ways the SLSI could intervene to resolve this issue. SLSI has signed a MoU with the Export Inspection Council of India in 2003 whereby Sri Lanka recognizes Indian quality standard/product certification for over 80 identified items. However, there has been no reciprocal agreement signed to state that India would accept quality standard/product certification issued by Sri Lanka.

Excessive time taken for lab testing was identified to be a main issue for especially exporters of perishables. With the introduction of new food safety and sanitary regulations issued by the Food Safety and Security Authority of India (FSSAI), some exporters of perishable items have stopped exporting to India (i.e. strawberries). The

new food safety regulations imposed by India in 2012 require sampling and testing of every shipment of food items that comes into India. This can take up to 3–4 days and highly perishable food items such as strawberries which have a shelf life of below 7 days become inconsumable by the time the shipments are released.

Excessive testing. Exporters complain of excessive testing by the Indian authorities. For instance, India requires samples for testing at the customs level for garment products. According to some exporters, if a consignment has a branded product with 100 pieces of garments, 5–7 pieces are taken for testing. It was felt that this was excessive and could be minimized.

Complexity and difficulties in obtaining information on new regulations. Sometimes the complexity of the information provided with regard to new regulations makes it difficult for traders, especially the small and medium enterprises to read and comprehend the requirements, (i.e. the recent food safety standard regulation by India).

The need to pay informal payments result in higher trading costs with India. Traders at times resort to informal payments which according to some respondents, "*get the process moving along faster*" but there is a substantial additional cost involved. Systems are by-passed because of this practice, which means that both governments may lose revenue, and more importantly, causing security breaches.

The absence of a fixed body or a help desk to address problems arising when trading under the agreement is an impediment in using the ILFTA. When problems arise regarding a shipment (i.e. documentation), there is no formal body of authority that can take up the complaints and address them quickly. Quick response is essential due to high costs associated with delays.

8 Policy Recommendations

Educate and raise awareness of customs officials on ISFTA concessions
Educating and rasing awareness of at least the main products exported/imported by the two countries; for example, in identifying the different forms of products and the relevant product categories can help reduce the complexities that arise at the point of clearance. Unawareness of customs officials of the products which get ISFTA concession was identified to be a main issue facing some industries. This results in having to pay additional duties thereby, negating the benefits of the agreement and restricting their use of the agreement.

Facilitating testing and certification
When exporting goods out of a country, the goods should conform to the standards and regulations set by the importing country or the buyer. However, this becomes a barrier if the process is not facilitated and the testing requirements are not practical leading to high costs and delays. This has been an issue for traders between India and Sri

Lanka and in this context, mutual recognition agreements between the two countries can assist in reducing the necessity to carry out additional checks. Furthermore, if the two governments can agree on testing/certifying or encourage an accredited testing facility from India to set up in Sri Lanka, then unnecessary delays and costs can be mitigated.

Also, the delays that occur as a result of having to test them in locations far from the port can be avoided if the requisite checks can be carried out at the port of entry and within a specified period of time. This is an essential requirement for perishable items. However, if the goods could be checked by the authorized designated labs/bodies prior to the shipment in the exporting countries that would be even more beneficial. The India-Singapore Comprehensive Economic Cooperation Agreement (CECA), for example, provides a framework for concluding Mutual Recognition Agreements (MRAs) so as to prevent duplicate testing and certification of products.

Furthermore, there is a need to better inform exporters/trader of services available to them to get relevant information on standards and other regulatory requirements. For example, SLSI acts as the enquiry point for WTO Technical Barriers to Trade in Sri Lanka. SLSI offers all stakeholders access to standards and regulatory information of any other country, technical enquiries on national, foreign and international standards, etc. Likewise, the Ministry of Health is the enquiry point of sanitary and phytosanitary matters in Sri Lanka. However, according to the SLSI they receive very few enquiries which may be due to unawareness of exporters/traders of this service.

There is also a need to improve laboratory facilities in Sri Lanka. Currently, there are about 15 other institutions in Sri Lanka that provide system certification, laboratory testing and product certification. However, the time taken to issue reports is high due to the limited laboratory facilities and lack of manpower/skills required for such testing. Hence, there is a need to expand lab facilities in the country to minimize delays as it translates into high demurrage costs at the port as well as opportunity cost for traders.

Mechanism to ensure capability/capacity of exporters to meet importing country requirements

There is a need to uplift the production capacity/supply capacity in Sri Lanka to ensure there is a proper mechanism in place to guarantee that the Sri Lankan traders are capable of meeting standards required for exporting products. While it is partly, developing the export sector of the country, dealing with established traders in India would also assist in understanding the requirements at that end, and to develop the capacity of the exporting companies.

Streamline procedures and automating systems for efficiency and better sharing of information

The need to streamline procedures and efficiency of the Indian customs was emphasized by many respondents as a key to facilitating trade between the two countries. The demand for different documentation and different interpretations of the agreement at the different ports of India has made exporting difficult and confusing.

Furthermore, according to some respondents, the lack of automation of border control systems in India has resulted in low information sharing between borders

including land borders, thereby hindering the free movement of goods under the FTA. It was mentioned that some traders are not motivated to trade with India because of these obstacles, resulting in opposition to any further developments of the agreement. Automation of borders and better connectivity were highlighted as important to overcome these issues. In addition, automation would also reduce people-to-people interaction in the trading system; its absence has led to human errors, bureaucracy, delays and corruption.

Educating traders on how they can facilitate a smooth flow of goods
Some of the delays and complexities arise due to the laxity and ignorance of exporters and importers which is beyond the immediate control of the authorities. For example, textiles shipments are sometimes sent with dangerous cargo such as chemicals. When this is the case, containers with dangerous cargo are transferred to a separate warehouse and as a result, it takes a much longer time to clear the textiles. This is more a responsibility of the loading party and they need to be more mindful as importers have less control over such situations.

Improve private sector consultation and engagement, prior to and during any further negotiations with India as it can help identify practical issues traders experience in doing business
Traders highlight that in addition to technically competent government officials, inputs from the private sector are key because the trading process is far more complex than that on paper. Consultation of those involved in every stage of the trading process including logistics companies, ports authority, customs, banks, shippers, traders, chambers and border protection agencies will ensure that every step of the trading process is looked into and the flow of goods between the two countries is facilitated.

Establish help/information desk that can address ISFTA-related issues
It was highlighted that there is a lack of knowledge of the FTA at various stages of the trading process. Traders need to be guided and provided with information to make the trading process easier by reducing the need to visit multiple agencies and duplicating documentation. This will also provide traders additional confidence of knowing that there is a local authority with the necessary contacts to facilitate trade between India and Sri Lanka. However, those manning such a unit should be trained professionals who can also play a coordinating role if they are to effectively assist the trading community including SMEs.

Incorporating TF into the agreement
India has addressed TF in their comprehensive economic cooperation agreements and comprehensive economic partnership agreements with countries like Korea and Malaysia. Although it has been suggested that TF issues would be addressed in a possible deeper agreement between the two countries, dealing with many of the existing issues under the ISFTA would be an important step especially to build confidence among traders.

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Chapter 12
Bilateral FTAs for Bangladesh: Identifying the 'Natural Partners'

Khondaker Golam Moazzem

1 Introduction

Bangladesh's economic partnership with different countries is still very limited. At present, it is member of a number of regional and sub-regional trade agreements (such as SAFTA and BIMSTEC); but those agreements have very limited impact on enhancing its bilateral trade with regional countries except India. As an LDC, Bangladesh enjoys preferential market access under GSP facility with a number of developed and advanced developing countries which include EU, USA, Canada, Japan, Turkey, China, India and Australia and other countries. With gradual decline of import tariff by major developed and developing, Bangladesh has been increasingly facing the pressure of erosion of preferences in those markets. Moreover, the benefit of preferential market access will be over as soon as Bangladesh will graduate from the LDC group possibly by 2027. Hence, the scope of enhancing bilateral trade based on unilateral preferential market access is gradually narrowed down and Bangladesh needs to take initiatives for enhancing bilateral trade and investment with important trading partners.

At present, Bangladesh does not have bilateral trade agreements with any country. Given the advantage of having preferential market access in major markets, Bangladesh did not feel any compulsion to sign bilateral trade agreements. Bangladesh is increasingly appreciating the pressure for not having bilateral trade agreements with major trading partners mainly for two reasons. First, the preferential market access will be getting limited and the period will be shortened as soon as it graduates from LDC group (by 2024) (Winters 2009); and second, Bangladesh's

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major competitor countries (with similar exportable goods) have either have bilateral trade agreements (e.g. India-ASEAN PTA, India-Mercusor PTA, India-Thai FTA) or in the process of negotiation with major developed countries (e.g. India-EU EPA, Vietnam-EU EPA). These agreements have already put in pressure to export of Bangladesh's major export products as well as would put pressure once the agreements have been signed and been operationalized. Hence, there are both 'offensive' and 'defense' interests for Bangladesh in order to think of initiating the discussion of signing bilateral FTAs with important trading partners.

Since Bangladesh has entered into a transitional period, it is appropriate time for it to initiate discussion of bilateral trade agreements. Besides, a number of developing country has expressed interest to sign bilateral free trade agreements with Bangladesh which include China, India, Vietnam and Malaysia. However, the preparation from the Bangladesh side is at very preliminary stage. In this backdrop, Bangladesh government needs to have a fuller understanding about the scope of bilateral economic cooperation including trade in goods and services, investment, connectivity, energy, etc. with potential partner countries. Present paper reviews Bangladesh's bilateral trade situation with major and potential trading partners and thereby explore which countries could be 'natural partners' of Bangladesh for bilateral economic partnership for trade and beyond.

2 Framework of the Study

2.1 Rationale for Bilateral FTA Between Heterogeneous Economies

The literature on preferential trade agreements provides mixed perception with regard to potential benefits for smaller economies. Traditionally, bilateral FTAs have been signed by countries with the objective of maintaining and expanding the market access as increasing intra-industry trade between member countries is most likely reduce cost of production and thereby improves competitiveness at international markets (Kawai and Wignaraja 2010). However, the extent of contribution of FTAs may vary widely depending on the size of the economies involved, extent of trade integration, terms and conditions of FTAs particularly rules of origin, etc. The FTA signed between developed and developing countries may or may not be the best options in trade-led development process. It depends on relative strength of countries involved in the FTA particularly in getting concessions in each other's market.

FTAs between developed and developing countries have always faced challenges in ensuring generating considerable trade creation effect. According to Bhagwati and Panagariya (1996), trade creation effect outweighs trade diversion effect if FTAs

signed between 'natural partners'.[1] There is no reason that natural partners are always located in proximate distance.[2] Low transport cost between two countries under FTA is more important determinant for forming FTA than two proximate countries. Thus, distance between two countries is always considered from the perspective of cost of production. However, it is not that the nearest ones are superior to the distant ones. Overall proximity reduces trade diversion effect of partner countries and thereby turned these countries to become 'natural partners'.

A number of literatures have rather argued that trade diversion not trade creation is one of the principal motives for forming FTA. Grossman and Helpman (1995) and Coe and Helpman (1995) showed that countries are forming FTAs with a view to penetrate member country's market through diversion of trade from existing supplying countries and thereby like to ensure more benefits through bilateral trade under the FTAs.

An FTA has both static and dynamic effects in terms of trade, investment, employment of member countries. In static sense, forming an FTA would have immediate short-term effect on bilateral trade where changes in global trade pattern are less considered. On the other hand, in dynamic sense, forming an FTA affects bilateral trade in the long term through greater trade liberalization at the global level. A major concern in case of FTA is losses of revenue generated at the import stage due to reduction of tariff on member countries' products. According to Panagariya (2000) if two small countries with approximately balanced bilateral trade form an FTA, country with higher tariff at initial stage is likely to lose the revenue more.

In case of FTA, reduction of tariff at member countries' market does not necessarily mean competitiveness of counterpart's products. It is largely depends on price competitiveness of products of member countries after the reduction of tariff. Unless significant price difference takes place after signing FTA, trade may continue to take place with non-member countries as like earlier. Similarly, extent of impact of the FTA partly depends on economies of scale of production operated in the member countries. Most of the above-mentioned consequences are considered under the assumption of perfect. Given the prevalence of imperfect competition at domestic markets, FTAs may not work as it is usually perceived in a competitive market framework. However, countries always target signing FTAs which is welfare-increasing for their national economies.

2.2 Policy Guidelines of Bangladesh for Bilateral FTAs

There is a policy guideline for bilateral FTAs which is prepared by the Ministry of Commerce (MoC). The objectives of this guideline are to make deeper trade integration for export diversification and enhancement of Bangladesh's exports and competitiveness. More specifically, the Policy Guidelines of FTA lead to three targets—(a)

[1]The 'natural partners' have been defined as partners with having high initial volume of bilateral trade with each other.

[2]Countries are better off in forming FTAs with distant rather than approximate countries when two countries are otherwise identical (Bhagwati and Panagariya 1996).

identification of potential countries for FTAs; (b) coverage of FTAs; and c) procedures to be followed for initiating negotiations. The guideline prioritizes following areas for trade negotiation: (a) economic strength, growth potential and demand for partner countries; (b) geographical proximity; (c) diplomatic relationship; (d) market access condition for Bangladesh; (e) willingness of the partner country; (f) scope for manpower exports in the partner countries; (g) consideration to elevate bilateral cooperation to strategic level; and (h) future prospect of cooperation.

The guideline has provided a broader framework for identification of prospective countries taking into account different strengths of these markets in terms of trade in goods, services and investment. The guideline provides broader indication about possible markets for Bangladeshi products in Asia, South America, Africa, countries with increasing demand for manpower, CIS countries, LDCs and developed countries. Government should set priority criteria for taking preparation about prospective markets, which is not reflected in the policy guideline.

In terms of coverage of FTAs, primary focus has been put forward on trade in goods and services. It may also cover investment depending on sectoral needs. Within the negotiation of trade in goods, a number of issues are to be taken into account which include tariffs, effective mechanism for removal of NTBs, rules of origin, customs cooperation, safeguard measures, dispute settlement mechanism and institutional mechanism to oversee the implementation of the agreements, etc. In case of trade in services, major focus should be put in place on movement of natural persons.

The policy guideline for FTA put focus on issues related to preparatory and negotiation phases for an FTA. Broadly, it is a policy guideline for Bangladesh putting emphasis mainly on 'offensive' interests. The policy guideline discusses major export interest of Bangladesh in prospective markets ('Offensive interest') but it mentions relatively less about export interest of partner countries in Bangladesh (which could be 'Defensive interest' of Bangladesh). Bangladesh could initiate discussion for an FTA if it does the baseline exercises of the counterpart. Such issues are less discussed in the policy framework.

3 Objective and Methodology of the Study

The objective of the study is to explore Bangladesh's possible 'natural partners' for bilateral cooperation mainly in terms of trade. In this context, the study examines Bangladesh's trade pattern with different countries and thereby identifies the possible countries which could be 'natural partners' for bilateral trade cooperation with Bangladesh.

The study applies a number of tools and techniques to examine possible scenarios regarding preferential market access including bilateral FTAs for Bangladesh at global level. Firstly, a simple statistical analysis has been carried out on bilateral trade with top 50 countries to understand the state of export, import and trade balance during 2005 and 2011. This analysis helps to understand growth in bilateral

trade of Bangladesh with major trading partners over the years. Secondly, a simple statistical analysis is presented with regard to state of export of top 50 export products to major markets and rate of tariffs for those products to understand the current state of trade barriers in respective markets. This analysis has been extended further by classifying products in terms of rates of tariffs faced in different markets such as 50%, 30–50%, 20–30%, 10–20%, 5–10% and less than 5% to appreciate the extent of barriers in different markets. Similar exercise has been carried out in case of import to Bangladesh by major trading partners and level of tariff faced by those products in Bangladesh to understand the interest of the trading partners for signing FTAs. These analyses helped to identify the possible 'natural trading partners' of Bangladesh in case of bilateral trade integration initiatives. Thirdly, a trade diversion analysis has been carried out to understand not only the conservative aspects of FTA issues as importing country but also to understand prospects as exporting country in the member countries' markets. This analysis has been extended further with a unit value analysis to appreciate the possible extent of trade diversion by Bangladeshi products in partner countries and vice versa.

Fourthly, a number of structured tools are used to get an impression in quantifiable terms. Thus, the study applies revealed comparative advantage indices (RCA), indicative trade potentials and trade complementarity indices for a selected set of products and markets particularly in the context of Korea, China and Malaysia. These analyses have been carried out by using global trade database, i.e. United Nations Commodity Trade database (COMTRADE).

4 An Overview of Bilateral Trade of Bangladesh: Experience with Top 50 Countries

Bangladesh's trade openness has significantly increased over the years—from 18.9% in 1990 to 26.2% in 2000, 47.4% in 2011 and 42.1% in 2015 (https://www.theglobaleconomy.com). Rise in trade openness is reflected with simultaneous rise in export and import. Although Bangladesh's export is heavily concentrated in limited number products in few major markets, it has been 'diversified' though at a limited scale both in terms of products and markets. For example, number of export products (at six-digit level) has increased between 2005 and 2015 from 1566 to 1867 in 2011; during the same period number of export destinations have increased from 171 in 2005 to 198 in 2011.

Among the top 48 trading partners, Bangladesh has enjoyed trade surplus with 25 countries in 2011 and trade deficit with 23 other countries (Table 1).[3] The respective number of countries in 2005 was 23 and 21, respectively. More importantly, Bangladesh has registered considerable growth in trade balance between 2005 and 2015 in most of the top 50 trading partners (except eight countries). However, the growth momentum has slowed down with major countries over the years—between

[3]There is lack of trade data (either export or import) of the rest seven countries.

Table 1 Bangladesh's bilateral trade (top 50 countries)

	2005			2015			Yearly percentage changes in trade balances between 2005 and 2015	Yearly percentage changes in trade balances between 2011 and 2015	Whether Bangladeshi products enjoy preferential market access or not?
	Import	Export	Trade balance 2005 (a)	Import	Export	Trade balance 2015 (c)			
USA	318,908	2,881,041	2,562,133	978,439	6,139,352	5,160,913	10.1	7.8	Partly
Germany	320,766	1,470,325	1,149,559	862,964	4,673,196	3,810,232	23.1	0.6	Fully
UK	145,283	1,191,880	1,046,597	287,416	3,499,880	3,212,464	20.7	11.3	Fully
France	69,520	767,250	697,730	188,944	1,755,411	1,566,467	12.5	−4.0	Fully
Italy	179,125	391,639	212,514	469,419	1,353,688	884,269	31.6	14.2	Fully
India	1,719,789	103,698	−1,616,091	5,882,080	517,891	−5,364,189	23.2	22.4	Fully
Spain	58,212	453,778	395,566	204,395	1,845,435	1,641,040	31.5	13.4	Fully
Belgium	53,564	437,846	384,282	258,984	904,454	645,470	6.8	1.0	Fully
Canada	85,062	404,644	319,582	743,627	1,062,631	319,004	0.0	−9.5	Fully
Netherlands	56,884	294,564	237,680	176,017	817,496	641,479	17.0	2.0	Fully
China	*2,402,740*	*98,835*	*−2,303,905*	*10,349,333*	*715,214*	−9,634,119	31.8	7.7	*Partly*
Sweden	173,038	147,464	−25,574	98,607	459,746	361,139	−151.2	10.6	Fully
Turkey	90,727	100,031	9,304	279,791	674,036	394,245	413.7	−12.1	Fully
Japan	*529,235*	*151,914*	*−377,321*	*1,704,511*	*957,370*	−747,141	9.8	11.5	Partly
Hong Kong	571,702	105,658	−466,044	2,624,046	213,698	−2,410,348	41.7	49.4	Partly
Singapore	695,432	95,123	−600,309	4,417,926	175,037	−4,242,889	60.7	24.0	No
Denmark	22,272	97,732	75,460	123,049	632,288	509,239	57.5	16.4	Fully

(continued)

Table 1 (continued)

	2005			2015			Yearly percentage changes in trade balances between 2005 and 2015	Yearly percentage changes in trade balances between 2011 and 2015	Whether Bangladeshi products enjoy preferential market access or not?
	Import	Export	Trade balance 2005 (a)	Import	Export	Trade balance 2015 (c)			
Korea	*611,137*	*45,495*	*−565,642*	*1,480,591*	*281,351*	−1,199,240	11.2	−3.3	Limited
Pakistan	234,411	68,086	−166,325	777,573	47,743	−729,830	33.9	−3.9	Limited
Ireland	1,595	50,353	48,758	12,846	206,058	193,212	29.6	7.5	Partly
Mexico	*1,574*	*40,508*	*38,934*	*6913*	*157,755*	150,842	28.7	−3.4	No
Russia	*187,147*	*16,317*	*−170,830*	*598,487*	*280,613*	−317,874	8.6	−98.6	Limited
Saudi Arabia	359,400	27,140	−332,260	651,969	190,124	−461,845	3.9		No
UAE	71,825	17,966	−53,859	901,844	353,637	−548,207	91.8		No
Iran	15,381	49,312	33,931	2436	39,023	36,587	0.8		No
Switzerland	75,300	66,100	−9,200	316,945	121,203	−195,742	202.8	−93.0	Fully
Poland	6,455	47,735	41,280	20,595	610,670	590,075	132.9	1.0	Fully
Austria	13,555	146,704	133,149	48,361	59,931	11,570	−9.1	−1.7	Fully
Australia	*180,410*	*33,970*	*−146,440*	*545,260*	*674,564*	129,304	−18.8	−35.3	*Limited*
C. Taipei	*443,639*	*18,308*	*−425,331*	*1,122,756*	*72,465*	−1,050,291	14.7	1.3	*Partly*
Indonesia	*353,301*	*18,915*	*−334,386*	*2,203,619*	*35,703*	−2,167,916	54.8	16.0	*No*
Malaysia	*409,399*	*21,389*	*−388,010*	*1,442,786*	*146,518*	−1,296,268	23.4	−6.3	*No*
Slovakia	557	8376	7819	843	76,244	75,401	86.4	−15.7	Fully
Greece	3520	17,644	14,124	19,788	28,628	8840	−3.7	−18.0	Fully
Finland	16,644	51,145	34,501	63,035	31,057	−31,978	−19.3	−20.4	Fully

(continued)

Table 1 (continued)

	2005			2015			Yearly percentage changes in trade balances between 2005 and 2015	Yearly percentage changes in trade balances between 2011 and 2015	Whether Bangladeshi products enjoy preferential market access or not?
	Import	Export	Trade balance 2005 (a)	Import	Export	Trade balance 2015 (c)			
Norway	10,686	64,139	53,453	5173	132,228	127,055	13.8	−2.1	Fully
South Africa	*10,466*	*6,563*	*−3,903*	*131,394*	*85,195*	−46,199	108.4	−58.9	*No*
Viet Nam	*22,050*	*31,970*	*9,920*	*722,167*	*52,568*	−669,599	−685.0		*No*
Sudan	17,997	15,928	−2,069	16,409	24,894	8485	−51.0		No
Portugal	873	10,632	9759	15,473	53,016	37,543	28.5	5.1	Fully
Thailand	*392,649*	*28,938*	*−363,711*	*860,605*	*34,773*	−825,832	12.7	−7.4	*No*
Brazil	*149,639*	*7460*	*−142,179*	*877,432*	*156,521*	*−720,911*	40.7	0.0	*No*
Sri Lanka	15,498	8867	−6631	46,308	24,348	−21,960	23.1	0.0	No
Czech	14,259	34,703	20,444	25,638	176,407	150,769	63.7	0.0	Fully
Syria	4,248	10,283	6035			0	−10.0		No
Egypt			0	50,786	20,718	−30,068		0.0	No
Ukraine	18,379	2109	−16,270	51,516	33,903	−17,613	0.8	0.0	No
Qatar	1018	1133	115	25,243	3,499	−21,744	−1900.8	0.0	No

Source ITC calculations based on UN COMTRADE statistics

2011 and 2015, growth of trade balance has either slowed down or negative. Slowdown in export in recent years is mainly attributed to lack of consumer demand in major markets which affect major consumer goods exporting countries at different degrees.

However, the overall rise in trade balance both in terms of its growth and in number of countries has been contributed by a number of factors including preferential market access in major developed and developing countries, rise in production and export capacity particularly of traditional products, rise in production of non-traditional products a part of which are being exported, tariff liberalization particularly in case of raw materials, intermediate products and capital machineries, relatively low labour cost and overall favourable national policies for strengthening industrialization and promotion of export.

A distinctive feature is Bangladesh as an LDC has been enjoying preferential market access in most of the top 50 trading partners. The preferences are however different in terms of levels of tariffs, coverage of products (from partial to full) and types of rules of origin in respective markets/regions. Such preferential market access, particularly in developed and developing countries, have made significant contribution to enhance Bangladesh's export particularly export of traditional products. This indicates that a further improvement in preferential terms and conditions even with existing preferential markets as well as introduction of preferential arrangement in new markets would make considerable changes in Bangladesh's export. However, this requires rise in productive capacity, improvement in price competitiveness and quality of products, etc.

Preferential market access justifies better competitiveness of Bangladeshi products in different markets. Given the favourable condition for export in major markets under preferential arrangements, Bangladesh has been following a 'conservative' position for undertaking initiatives for bilateral trade agreements. Though this position of the government is well understood, opportunities in other large markets could not be enjoyed through taking such 'conservative' position without taking initiatives for opening up the market at preferential terms. Bangladesh has long been waiting for completion of Doha Development Round (DDR) in the WTO which would facilitate better market access to a number of potential markets. While Doha negotiations have made slow progress so far, Bangladesh should consider alternate avenues, where bilateral FTA could be a possible option.

5 Identifying the Natural Partners for Bilateral FTAs: Product-Wise and Market-Wise Analysis

There are 'offensive' and 'defensive' interests in case of bilateral FTAs. 'Offensive' interest includes scopes for enhancing export both through reduction of tariff in importing countries and rising export of major traditional and non-traditional products. On the other hand, 'defensive interest' includes less adverse impact due to

reduction of tariffs on domestic industries, limited trade diversion effect, less loss of revenue at import stage, etc. To understand those issues, an in-depth understanding on current state of bilateral trade of different products in different markets is highly important. Present study is however put forward a brief analysis on a selective basis to provide a broader understanding on those issues in the context of FTAs.

5.1 Export Destinations of Bangladesh's Major Products

A product-wise analysis has been carried out for top 50 products exported in 2011 (Table 2). Each product was exported to 10–15 countries which covered over 90 per cent of total export. Such an analysis will help to understand the prospective markets where Bangladesh has sufficient export interest. This analysis will partly comply with Bangladesh's 'offensive interest' in export market.

Bangladesh's major export products are mostly textiles and apparels—out of the top 100 export products 70% products are related to apparels (61 and 62). Thus, market analysis of major products is overwhelmingly directed by export of traditional products. Bangladesh's almost all major products are exported to major markets of developed countries and a number of developing countries. In most cases, export of these products has enjoyed duty-free market access. USA, which is the largest export market of Bangladesh, provides GSP facility at a limited number of products which does not cover major export products including apparels (tariff range: 0–20%). High tariff rates are prevailed in other major markets (i.e. markets where at least 10 major products are currently being exported) including Russia, Turkey, China, Mexico, Brazil, Korea, Croatia, South Africa, Honduras, Chinese Taipei, Serbia, Ukraine, Argentina, Malaysia and Singapore. There are another 47 markets where export of major products are relatively low (less than 10 products); out of these markets Bangladesh faced tariffs at different levels in 33 markets. Thus, there are scopes for undertaking initiatives for reducing tariffs in a number of those markets. Such initiative has to be prioritized taking into account the relative importance of these markets in terms of Bangladesh's export interest.

5.2 Import of Bangladesh

Analysis of structure of import of Bangladesh is not only important for importing country but also important for Bangladesh with a view to understand the 'Defensive Interest' which may facilitate finding out possible mechanism for taking initiative regarding preferential market access particularly under bilateral FTA. According to Table 3, Bangladesh has significant import of major products from a number of countries which include India, China, Germany, Thailand, USA, Malaysia, Korea, Japan, Netherlands, Chinese Taipei, Pakistan, Hong Kong, France, Indonesia, Italy, Spain, Turkey, Italy, Indonesia, Singapore, UK, Belgium, Brazil, Russia, Canada,

Table 2 Bangladesh's export of top 50 products in major markets

Bangladesh's export to	No. of Top 50 products exported (2011)	Tariff faced by Bangladesh's products, 2011	Total export of the products ('000 US$), 2015
USA	50	0–20.3	6,120,528
Canada	49	0	1,225,062
Germany	49	0	5,498,308
Spain	49	0	2,516,937
Belgium	47	0	1,137,159
Italy	47	0	1,463,735
UK	47	0	3,521,074
France	46	0	2,730,901
Netherlands	45	0	1,096,517
Poland	45	0	1,016,054
Russian Federation	44	0–32.8	673,865
Turkey	43	0–25	881,039
Japan	42	0	1,216,434
Denmark	36	0	669,459
Switzerland	36	0	449,249
China	35	3–13.6	869,398
Czech Republic	35	0	407,233
Slovakia	35	0	251,945
Sweden	35	0	457,438
Australia	34	0	659,789
Norway	33	0	251,129
Ireland	29	0	211,060
Mexico	29	0–30	272,776
Brazil	28		125,054
Republic of Korea	28	1.5–13	293,112
Slovenia	26	0	37,511
South Africa	24		76,976
New Zealand	22	0	77,242
Finland	21	0	175,090
Hong Kong, China	21	0	227,970
Austria	18	0	228,228
Chinese Taipei	17		85,187
Serbia	16		51,717
Chile	15		68,871
Lebanon	14	0–40.7	38,759

(continued)

Table 2 (continued)

Bangladesh's export to	No. of Top 50 products exported (2011)	Tariff faced by Bangladesh's products, 2011	Total export of the products ('000 US$), 2015
Singapore	12	0	217,674
India	11	0–30.8	677,098
Malaysia	11	0–343.7	190,022
Portugal	10	0	61,051
Thailand	8		56,301
Indonesia	6		68,404
Pakistan			48,598
Qatar			47,981
Greece			39,966

Source ITC calculations based on UN COMTRADE statistics

Mexico, Australia and Argentina. Thus, a large number of countries have export interest to Bangladesh which could be the minimum benchmark required for any kinds of discussion on bilateral FTA. For most of the countries, tariff structure is ranged between 0 and 25% indicating products from raw materials to finished goods. In other words, a high tariff structure at initial level could always be considered 'positive' for a prospective country to discuss about FTA. On the other hand, high tariff on imported products indicates its implications on domestic industry as well as on revenue. Thus, reduction of tariff at least in case of finished products would adversely affect the domestic industry on the one hand and may cause loss of revenue on the other. A selected set of countries which have been involved in considerable bilateral trade might be considered for bilateral FTAs.

5.3 Identifying 'Natural Partners' for FTA

Taking the theoretical basis, an analysis has been carried out to identify possible natural partners for forming FTA with Bangladesh (Table 4). Of course, this analysis is only indicative to understand the scope for forming FTA with other countries. Considering at least 10 out of 50 products to be exported by Bangladesh and a good number of products are to be imported at bilateral trade as the benchmark for discussion on FTA, a total of 42 countries could be identified as possible 'natural partners' (Table 4). Interestingly, a large number of these countries (23 countries) are currently providing duty-free market access to Bangladesh mainly those are EU countries. Few others have provided preferential tariffs at different levels.

Countries being 'natural partners' for bilateral trade depend on mutual interest from both sides. Analysis shows that for Bangladesh, possible such partners could be Argentina, Brazil, Chile, China, Chinese Taipei, Malaysia, Mexico, Korea, Russia,

Table 3 Bangladesh's import from different countries

Import from	No. of products under the Top 50 imported products, 2011	Tariff range, 2011	Import in 2016 ('000 US$)
India	42	0–25	5,668,793
China	35	0–25	14,300,635
Germany	33	0–25	873,449
Thailand	29	0–25	932,802
USA	29	0–25	905,703
Malaysia	28	0–25	1,240,818
Republic of Korea	28	0–25	1,158,421
Japan	26	0–25	1,582,971
Netherlands	25	0–25	203,791
Chinese Taipei	23	5–25	920,340
Pakistan	23	0–25	656,160
France	22	0–25	208,770
Hong Kong, China	22	0–25	1,496,986
Indonesia	22	0–25	1,266,688
Italy	22	5–25	562,778
Singapore	20	0–25	2,525,913
Spain	20	0–25	126,311
Turkey	20	0–25	263,777
UK	19	0–25	279,747
Belgium	18	5	210,001
Brazil	17	0–25	1,091,414
Russian Federation	16	0–25	767,226
Canada	15	0–25	582,580
Mexico	14	0–25	
Australia	13	0–16.7	616,110
Argentina	12	5–25	489,732
Finland	9	0–25	
Ukraine	8	0–25	
Greece	7	0–25	31,732
Nepal	7	0–25	
South Africa	7	0–25	118,852
Sri Lanka	7	8.5–25	118,866
Sweden	7	5–25	53,821
Czech Republic	6	0–25	42,618
Poland	6	0–25	31,244

Source ITC calculations based on UN COMTRADE statistics

Table 4 Possible 'natural partners' for forming FTA

Bangladesh's export side			Bangladesh's import side		
Export to	No. of top 50 products exported, 2011	Tariff faced by Bangladesh's products, 2011	Import from	No of imported products by Bangladesh, 2011	Tariff range, 2011
Argentina	13	14–35	Argentina	12	5–25
Australia	34	0	Australia	13	0–16.7
Austria	18	0	Austria	5	0–25
Belgium	47	0	Belgium	18	5
Brazil	28	12,997	Brazil	17	0–25
Canada	49	0	Canada	15	0–25
Chile	15		Chile	3	0–25
China	35	3–13.6	China	35	0–25
C. Taipei	17	41,345	C. Taipei	23	5–25
Czech	35	0	Czech	6	0–25
Denmark	36	0	Denmark	5	0–25
France	46	0	France	22	0–25
Germany	49	0	Germany	33	0–25
Hong Kong	21	0	Hong Kong	22	0–25
India	11	0	India	42	0–25
Ireland	29	0	Ireland	4	0–25
Italy	47	0	Italy	22	5–25
Japan	42	0	Japan	26	0–25
Lebanon	14	0–40.7	Lebanon	5	5–25
Malaysia	11	0–343.7	Malaysia	28	0–25
Mexico	29	0–30	Mexico	14	0–25
Netherlands	45	0	Netherlands	25	0–25
New Zealand	22	0	New Zealand	5	0–25
Norway	33	0	Norway	4	5–25
Poland	45	0	Poland	6	0–25
Portugal	10	0	Portugal	3	14.6–25
Korea	28	1.5–13	Korea	28	0–25
Romania	12	0	Romania	2	0
Russia	44	0–32.8	Russia	16	0–25
Singapore	12	0	Singapore	20	0–25
South Africa	24	16,711	South Africa	7	0–25
Spain	49	0	Spain	20	0–25

(continued)

Table 4 (continued)

Bangladesh's export side			Bangladesh's import side		
Export to	No. of top 50 products exported, 2011	Tariff faced by Bangladesh's products, 2011	Import from	No of imported products by Bangladesh, 2011	Tariff range, 2011
Sweden	35	0	Sweden	7	5–25
Switzerland	36	0	Switzerland	6	0–25
Turkey	43	0–25	Turkey	20	0–25
UK	47	0	UK	19	0–25
USA	50	0–20.3	USA	29	0–25

Source ITC calculations based on UN COMTRADE statistics

South Africa and Ukraine. Besides, there are a second set of countries which are also important for Bangladesh's trade such as Indonesia, Thailand, etc. This is happened because Bangladesh is facing significant level of tariffs in a number of markets which include Argentina (14–54%), Brazil (8–35%), Malaysia (0–20%), Mexico (0–30%), Korea (0–13%), Russia (0–33%) and USA (0–55%). Most of the South Asian countries have maintained low level of tariffs including Pakistan and Sri Lanka but number of major products traded is relatively small; India is the lone country where significant export and import interest prevails.[4]

Take an example of bilateral trade between Korea and Bangladesh where substantial amount of trade has taken place in a number of products (Table 5). Most of Bangladesh's export products face moderately high tariffs except a few. On the other hand, most of the products of Korea's export interest to Bangladesh face relatively low tariff mainly because of the nature of products such as raw materials, intermediate and machineries (where tariffs are usually low). The number of finished consumer goods imported from Korea with high tariff (25%) is small in number (9 out of 30 products) which indicate less pressure on domestic market as well as less pressure on loss of revenue. Although a large number of export products are traditional apparels related one (HS codes 61 and 62: 19 out of 31 products), a number of non-traditional export products are exported there. Thus, the scopes for enhancing export both traditional and non-traditional products are significant if preferential market arrangement could be extended further.

[4]India is providing duty-free market access for all products except 22 products under the special and differential treatment of the SAFTA accord.

Table 5 'Natural partners'—case of trade between Bangladesh and Korea

Export from Bangladesh to Korea				Import from Korea to Bangladesh			
Products	Exported value 2011 (USD thousand)	Share in Bangladesh's exports (%)	Tariff (estimated) faced by Bangladesh (%)	Products	Imported value 2011 (USD thousand)	Share in Bangladesh's imports (%)	Tariff (estimated) applied by Bangladesh (%)
620192	55834	55.3	2.5	720711	199390	52.2	5
530710	26908	12.3	13	720839	98343	27.1	8.5
630260	10685	7.4	6.5	790111	89281	83.1	12
610343	5250	7.2	0	252310	70579	31.4	14.6
630622	4054	3.2	11.7	390410	17258	14.2	5
620530	2906	1.6	0	320416	12541	12.4	5
620293	2391	1.6		390760	10212	7.7	2.5
650590	2134	1.3	12.7	851712	6106	1.7	
530720	1322	0.6	7.1	845229	3436	2.8	8.5
610610	1294	0.5	1.5	520932	2965	1.5	25
610342	1212	1	13	540752	2241	1.5	25
410712	1115	1	13	851762	1609	1.2	
620343	1005	0.4	6.5	520832	1440	1.3	25
610230	896	1.1	0	170199	871	0.5	16.7
620469	795	0.8	13	840999	628	0.6	5
610990	517	0.3	5.6	870322	380	0.3	21.4
620452	377	0.3	6.5	850213	250	0.1	0
620193	260	0.1	13	600622	230	0.2	25
621040	207	0.2	13	999999	86	0	
530720	206	0.3	9.1	871120	64	0	25
610443	194	0.2	6.5	520939	58	0	25
240120	152	0.2	11	520839	36	0	25
610442	136	0.1	13	520524	35	0	12
620463	135	0.1	9.1	520523	32	0	12
610821	107	0.1	8	521041	30	0	25
640399	102	0.1	13	520942	1	0	25
611420	102	0.1	6.5	840890	1	0	6.5
611011	68	0.1	13	271011			14.8
640391	59	0.1	8.1				

Source ITC calculations based on UN COMTRADE statistics

5.4 Analysis of 'Trade Diversion' Effect

5.4.1 Bangladesh's Export

Taking the logic of strong trade diversion effect to be the reason for formation of FTA, an analysis has been carried out in order to understand the extent of trade diversion effect both as exporter and importer (Table 6). For example, HS code 410712 (i.e. Grain splits leather 'incl. parchment-dressed leather', of the whole) is exported by Bangladesh to Korea by a large amount (e.g. US$55.8 million and US$4.2 million respectively). But in both markets Bangladeshi products face average tariffs of 2.5%. In contrast, some of the Southeast Asian countries which are exporters of same category of product have enjoyed zero tariff market access in Korea. Now if Bangladesh could form FTA with Korea and could get zero tariff market access for the above-mentioned product, it would be more competitive firstly by enjoying the benefit at par with those of other Southeast Asian countries and secondly, it would be better competitive over those of other supplying countries currently providing same or higher level of tariff vis-à-vis those of Bangladeshi product. For example, in case of Korea a zero tariff on Bangladesh's product of 410712 would put it at par with Vietnam and Indonesia but place it in advance over India and China (which are currently facing same rate of tariff as like Bangladesh) and also put it over Brazil, Pakistan and Poland (which are currently facing higher rate of tariff vis-à-vis Bangladesh). The unit value of different exporting countries shows that Bangladeshi product is not

Table 6 Bangladesh's export of 410,712 (i.e. grain splits leather 'incl. parchment-dressed leather', of the whole) to Korea: trade diversion effect

Exporters	Trade indicators					Tariff (estimated) applied by Republic of Korea (%)
	Imported value 2011 (USD thousand)	Share in Republic of Korea's imports (%)	Unit value (USD/unit)	Ranking of partner countries in world exports	Share of partner countries in world exports (%)	
World	76,174	100	20,677		100	
Bangladesh	*55,834*	*73.3*	*23,699*	*7*	*2.2*	*2.5*
Brazil	6022	7.9	13,718	2	15.4	5
Pakistan	3800	5	11,047	14	1	5
India	3745	4.9	16,073	36	0.1	2.5
Italy	2556	3.4	19,075	1	36.2	5
Indonesia	1109	1.5	23,104	16	1	0
Viet Nam	603	0.8	20,100	20	0.6	0
Poland	420	0.6	70,000	23	0.4	5
China	346	0.5	23,067	10	1.3	2.5

Source ITC calculations based on UN COMTRADE statistics

necessarily the most competitive one in the Korean market. Hence reduction of tariff under a possible FTA between Bangladesh and Korea would favourably contribute to Bangladesh's export to selected categories of products mainly through diversion of trade. Similar is the case in the Chinese market where Bangladesh would get benefit over a number of other supplying countries in selected products through trade diversion (Table 7). To what extent Bangladesh would enjoy the benefit of zero tariff over others would depend on their price competitiveness. A unit value analysis on products exported to Korea and China reveals that a reduction of tariff would further enhance the competitiveness of Bangladeshi products in both markets.[5]

Table 7 Bangladesh's export of 410,712 (i.e. grain splits leather 'incl. parchment-dressed leather', of the whole) to China: trade diversion effect

World	604,943	100	20,298		100	
Italy	214,743	35.5	21,621	1	36.2	5.5
Brazil	90,220	14.9	18,171	2	15.4	5.5
Korea	58,841	9.7	15,724	17	0.9	5.5
India	41,684	6.9	15,742	36	0.1	5.5
Australia	29,111	4.8	30,104	13	1.1	5.5
Thailand	23,384	3.9	21,220	33	0.1	0
Argentina	19,773	3.3	24,202	15	1	5.5
Indonesia	18,073	3	16,093	16	1	0
Japan	16,322	2.7	25,072	30	0.2	5.5
Pakistan	11,160	1.8	18,788	14	1	3
Viet Nam	9672	1.6	19,901	20	0.6	0
Germany	9467	1.6	47,813	5	6.2	5.5
Mexico	8469	1.4	30,464	18	0.8	5.5
China	7423	1.2	16,986	10	1.3	
Costa Rica	6735	1.1	34,538	60	0	5.2
USA	6531	1.1	21,554	27	0.3	5.5
Spain	5765	1	33,517	6	2.6	5.5
Chinese Taipei	5100	0.8	14,697	35	0.1	5.5
Bangladesh	*4195*	*0.7*	*23,049*	*7*	*2.2*	*5.5*

Source ITC calculations based on UN COMTRADE statistics

[5]Given the diverse nature and quality of products, unit value of products under the same category may widely differ both at intra-country and inter-country levels.

Table 8 Bangladesh's import of product 271,019 (other petroleum oils and preparations): trade diversion effect

Exporting country	Trade indicators					
	Exported value 2011 (USD thousand)	Share in total exports (%)	Unit value (USD/unit)	Ranking of partner countries in world imports	Share of partner countries in world imports (%)	Tariff (estimated) (%)
Malaysia	968,575	12.7	923	50	0.4	16.8
Singapore	750,895	1.4	790	50	0.4	16.8
C. Taipei	222,557	1.6	971	50	0.4	16.8
Korea	195,853	0.5	907	50	0.4	16.8
India	45,978	0.1	993	50	0.4	16.8
China	40,197	0.2	758	50	0.4	16.8

Source ITC calculations based on UN COMTRADE statistics

5.4.2 Import of Major Products to Bangladesh

Bangladesh would also face trade diversion effect while its import concerned is under possible FTAs. At the same time, a large extent of trade diversion by a particular country over other suppliers would encourage it to consider about FTA (Table 8). For example, Bangladesh imported HS Code 271019 product (petroleum oils and preparations) from a number of countries including Korea and China. All the supplying country faces a tariff rate of 16.8%. If a bilateral FTA takes place between Bangladesh and Korea with reduction of tariff on this specific product, both the country would be in a favourable position compared to those of other supplying countries such as Malaysia, Singapore, India, Chinese Taipei, etc. Since Korea is not necessarily the lowest cost suppliers, any reduction of tariff would create the possibility of trade diversion effect on Bangladesh.

6 Concluding Remarks: Bangladesh's Strategies with Regard to Bilateral FTAs

(a) Bangladesh has good reasons to pursue negotiations for preferential market access including bilateral FTAs on a case by case basis. It is fact that Bangladesh is currently enjoying preferential market access to a number of developed countries; but it is not enjoying such facilities in other major markets. Moreover, preferential market access provided by many developing countries covers a limited set of products. Thus, there are scopes of taking initiatives to identify natural partners with whom Bangladesh has strong potentiality for bilateral cooperation.

(b) Rise in bilateralism has been discerned through increasing number of bilateral FTAs signed by developed and developing countries in recent years. Bangladesh is not the member of these FTAs, but it would face adverse impact in export and overall economic welfare because of erosion of preferences due to export similarity with those competing countries (Winters 2009). Unless Bangladesh would go for bilateral economic partnership with potential natural partners, Bangladesh's export would be affected because of these new bilateral/regional trade arrangements. Thus, Bangladesh should take bold steps towards that direction.

(c) Bangladesh should not wait for proposals from others rather it should place proposals to other countries. Anecdotal Information that as many as 50 countries are making queries at different levels regarding FTAs and/or preferential market access. However, Bangladesh should follow the policy guidelines with the objective of greater market access, reduction of cost of production, strengthening the value chain and overall welfare enhancing though forming FTA.

(d) Bangladesh's production base, production capacity, export of products, competitiveness of products in terms of price and quality indicate that it should follow multiple strategies in order to enhance its export. These strategies include: a) pursuing countries to go for bilateral FTA mainly focusing on merchandise trade at a limited scale; and b) pursuing countries to go for broader bilateral cooperation covering services, investment, energy cooperation, IT and trade facilitation issues.

(e) The current level of bilateral trade indicates that there are a number of countries which could be considered for offering FTA at a limited scale. There are a number of countries which could be considered for FTA from the perspective of promoting non-traditional exports. An extensive analysis is required to identify markets for such initiative.

(f) Bangladesh needs to take specific position with regard to specific markets. For example, given the current level of trade cooperation between different countries such as China, India, Sri Lanka, Thailand, Bangladesh should consider broader economic cooperation as like CEPA which would cover trade in goods and services, investment and trade facilitation, etc. There are countries such as Malaysia where Bangladesh has special interest in trade in services particularly under mode 4 (i.e. movement of natural persons).

(g) Bangladesh's export competitiveness is limited in few products and most of its industries are still struggling to become competitive even at local level. Bangladesh needs to be cautious while negotiating with partner countries considering possible impact and implications on domestic industry, generation of revenue, possible effect on employment, etc. Since FTAs are signed for strengthening partner country's industrialization process, a value chain-based approach should be taken into account.

(h) Institutional capacity to deal with these issues requires further improvement. There are lots of technical-, analytical- and information/data-related tasks involved at the early phases, preparatory processes as well as at the negotiation phases. Currently, Bangladesh Tariff Commission is in charge for undertaking

these activities. Because of limited human resources, analysis and preparatory works could not be speeded up. Thus, recruitment of skilled professionals and arranging training for them are required on an urgent basis. An advisory board could be formed comprising of government high officials, private sector representatives, civil society organizations and research organizations to get their views regarding FTA-related issues.

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Chapter 13
Informality in Bangladesh's Agricultural Trade with SAARC: Addressing the Emerging Concerns

Mustafizur Rahman and Estiaque Bari

1 Introduction

South Asia has made impressive strides in meeting the targets of the Millennium Development Goals (MDGs) (United Nations 2015). The region has achieved notable success in terms of many of the food security indicators which has contributed to significant reduction in the poverty levels and hunger (United Nations 2015). In spite of this, South Asia is regarded as the most food-insecure region in the world where about an estimated 323 million people live on less than USD 1.90 a day (the international poverty line); 280 million people remain undernourished (Rahman et al. 2017). There is a broad consensus that common and cooperative regional efforts will be called for to support and complement national and global initiatives towards meeting the Sustainable Development Goals (SDGs), particularly in view of Goal 1 and Goal 2 of the SDGs which aspire for a world of no poverty and zero hunger respectively. In this backdrop, there is a need for rethinking as to how to deepen cooperation among member countries of the South Asian Association for Regional Cooperation (SAARC) if concerned SDGs are to be achieved in the context of South Asian region. It is from this perspective that a deeper understanding about the state of regional trade in agriculture, both formal and informal, is important in going forward. This paper focuses on issues pertaining particularly to informal trade in agriculture which has remained a relatively less investigated area in the literature.

As is known, South Asia has continued to remain one of the least integrated regions of the world—intra-regional trade was only about 5.9% in 2016. Whilst the

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intra-regional agricultural trade was relatively higher, the trend and picture are not encouraging. The share of SAARC's intra-regional export in agriculture, as percentage of total agricultural-trade of SAARC countries, dropped sharply from 21.7% in 2014 to 15.6% in 2016; share of imports has come down from 24.2 to 16.2% over the corresponding period (Authors' calculation from the dataset of International Trade Centre 2017). Bangladesh's agricultural trade (average of export and import in FY2014–15 and FY2015–16) with SAARC countries (USD 1.7 billion) accounted for only about 2.4% of its global trade (USD 73 billion) for the corresponding year. Import dominated this trade (about 83.0% of intra-regional trade). On average, more than 40% of Bangladesh's total export to SAARC countries was in agricultural commodities. Within the SAARC, Bangladesh's major export destinations were India followed by Pakistan, Nepal and Sri Lanka. Export of Bangladesh's agricultural commodities to India accounted for about 79% of its regional export; corresponding share of India in Bangladesh's import was about 96% (Authors' calculation from the dataset of International Trade Centre 2017).

It is reckoned, however, that the level and trends in formal trade depicted above do not reveal the actual picture because significant agricultural trade takes place through the informal channels. Informality is driven by several factors including the nature of cross border production and supply chains, likelihood of higher profit margins, social networks among local people, existing networks among informal traders across the border, and border and trade-policy measures put in place by respective countries. SAARC region is also susceptible to volatility in global food grains prices as was experienced during FY2007–08 which is also one of the reasons that encourage informality (Rahman et al. 2017).

While Bangladesh-India bilateral trade, at USD 6820 million in FY2016–17, was the highest in the region (Bangladesh Bank 2017; Export Promotion Bureau 2017), the fact of the 4096 km of land border between Bangladesh and India (fifth largest border of the world) is one key reason driving informal transactions across borders. As would be anticipated, reliable figures for informal trade are hard to estimate. Chaudhari (1995) estimated that the magnitude of formal and informal trade between Bangladesh and India was roughly the same during FY1992–93. A World Bank study found that although, over time, the share of informal trade between Bangladesh and India has come down, it still accounted for a significantly high 41%—carried out mostly through the various land routes (World Bank 2006). One disquieting feature of agricultural informal trade is that the region suffers from common and communicable transboundary plant and animal diseases. To a large extent, this is driven by informality.

The overarching objective of the present study is to capture the nature and magnitude of informal agricultural trade of Bangladesh with SAARC countries and to come up with recommendations to address some of the attendant concerns. Specific objectives of the study are (a) to understand Bangladesh's informal agricultural trade patterns, trends and consequences in view of trade misinvoicing, quasi-legal and informal trade with SAARC countries and (b) to come up with a set of recommendations towards deepening Bangladesh's agricultural trade with the SAARC countries by reducing the flow of informal trade.

The paper includes five sections. Following this introductory section, the second section presents methodology and data used in the study. Third section lays out an analysis of trade misinvoicing in agricultural trade between Bangladesh and other SAARC countries. Fourth section presents salient features and stylized facts as regards the informal trade taking place between Bangladesh and other SAARC countries with a particular focus on cattle trade with India. An attempt has been made to capture the nature of trade in agricultural items in the border haats. Finally, the fifth section provides a set of recommendations to deepen Bangladesh's agricultural trade with the SAARC countries by reducing the informal part of it.

2 Methodology and Data

For the purpose of the present study, the term 'agricultural commodities/products' refers to primary commodities (HS code: 1–24) and jute (HS code: 53). It is important to note that primary commodities include crops, livestock, fishery and forest items. Jute has also been included as an agricultural commodity. In addition, the term 'formal trade' refers to the value of trade through formal channels as reported by official data. On the contrary, the term 'informal trade' refers to trade in commodities which does not satisfy customs procedures of countries or are smuggled illegally across borders (these could include both legal as also illegal/banned items). A part of the informal trade has now been brought within the ambit of formal trade through introduction of border haats (BHs) which is discussed in some detail in subsequent sections in this paper.

The present paper draws on both published and unpublished sources of information. Information on informal trade was primarily gleaned through Key Informant Interviews (KIIs) with relevant government officials, independent researchers, and people directly or indirectly engaged in cattle and other transboundary agricultural trade.[1] Besides secondary literature, the study has also reviewed newspaper articles, online documentaries, anecdotal information and personal blogs (to have a better understanding about the nature and dynamics of undocumented trade). A diverse range of datasets was accessed to analyse trade flows in the region. To analyse the trends and patterns of the formal agricultural trade between Bangladesh and other SAARC countries, disaggregated export data (2-digit harmonised system (HS) code-wise) was taken from Export Promotion Bureau (EPB); import data was taken from the Bangladesh Bank (BB). Information on trade in BHs was collected from Ministry of Commerce (Bangladesh) and field visit to Tarapur-Kamalasagar BH; information on cattle and other informal agricultural trade items was collected during KIIs including field visits to Gabtoli and Chuadanga (Darshana; Jibonagar border etc.) and from

[1] The research team conducted seven KIIs including three field visits to collect relevant information. During these KIIs (including field visits) a total of 56 people were consulted either on an individual basis or in groups.

various government documents and secondary literature. Information related to transboundary diseases was collected from consultations with government officials from the Department of Livestock Services (DLS). Product-level retail (weekly average) price data was analysed from the database of Department of Agricultural Marketing (DAM). Descriptive analysis, meta-analysis and trend analysis were carried out to examine the formal and informal trade patterns of Bangladesh with other SAARC countries and beyond.

3 Misinvoicing in Agricultural Trade

As is known, trade mispricing (over and under invoicing) is a widespread practice, it seriously undermines reliability of trade-related data. Despite the fact that a large number of items are duty-free or enjoy preferential duties under bilateral initiatives or thanks to South Asian Free Trade Agreement (SAFTA) this remains a concern in South Asia. In the course of field visits, prevailing high rate of customs and supplementary duties on agricultural items traded within the SAARC region was mentioned as one of the reasons for widespread trade misinvoicing. For instance, Bangladesh's agri-duty structure reveals that import duties on agricultural items remained significantly high. Chapter-wise analysis of tariff data on agricultural commodities (HS code: 1–24) suggests that in 2017–18 (NBR 2017), 25% customs duty was levied on 89% of live animal and animal products, 56% of vegetable products, 30% of animal/vegetable fats and oil and their cleavage products, 86% of prepared foodstuffs, beverages, spirits and vinegars; and 63% of jute. High tariffs tend to incentivise under invoicing (as also informal trade).

In addition, the prevalence of non-tariff measures and barriers concerning Bangladesh's trade with other SAARC countries also are reasons for trade to take place through informal channels. Excessive bureaucracy, weak state of trade facilitation, customs inefficiencies and lack of data sharing arrangement that enables mispricing compound the situation. Authors have made an attempt to estimate the magnitude of the possible range of agricultural trade misinvoicing which is presented in Table 1.

According to the estimation carried out by the authors, three years' moving average for trade misinvoicing (trade inflows) for the year 2015 was about USD 470.8 million (see Annex for the details).[2] This was 32.6% of Bangladesh's recorded formal agricultural trade with SAARC countries. However, the magnitude of agricultural trade misinvoicing varies widely from year to year. For instance, in 2013, three years' moving average of trade misinvoicng was found to be worth USD 734 million (Table 1).

[2]The actual amount of underinvoicing will perhaps be higher. According to the author calculation, import-weighted tariff rate for agri-items in Bangladesh is about 19.8% which incentivizes underinvoicing.

Table 1 Trade (import) misinvoicing of Bangladesh's agricultural trade with SAARC countries (in million USD)

Year	India	Pakistan	All SAARC countries
2010	−516.1	−0.4	−563.0
2011	−494.0	−11.6	−563.5
2012	−530.0	−11.6	−594.8
2013	−686.4	−12.0	−734.1
2015	−365.1	−3.5	−470.8
Underinvoicing as share of formal agricultural import with respective SAARC partner countries in 2015 (%)	26.0	28.7	32.6

Source Authors' estimation by using international trade centre database, 2017
Note A large segment of the data was missing for 2014, therefore, authors did not present this in the table

4 Bangladesh's Informal Trade with SAARC Countries

In addition to the 4096 km of border with India, Bangladesh shares a 271 km long border with Myanmar (of which the Naaf River boundary is about 64 km). Managing this border is by no means an easy task. A large part of this border is highly porous. This section examines cross-border informal trade in agricultural products, primarily with India. A large part of the trade is dominated by cattle trade.

4.1 Informal Trade in Agricultural Inputs, Products, Fruits and Spices

Agricultural items that are generally traded through informal channels between Bangladesh and India include seed varieties of rice, jute, pulses, other vegetables and tomato and onion. Other items are fresh vegetable items, betel nuts, seasonal fruits such as mango, banana, apple, guava etc.[3] Informal trade also includes items like fresh onion, turmeric, ginger etc. Some of the other food items are sugar, salt etc. (information collected from KIIs; Pohit and Taneja 2001; Taneja 2001). The key drivers of the informal trade vary from product to product. Some of the reasons of informal agriculture in seeds between Bangladesh and India originate from the difficulties faced in conducting formal trade. Seeds are traded because of longevity of seeds, higher yield rate and productivity, lower susceptibility to pesticide, price differences, grain weights, proximity to local market, easy access and availability, cultural, social and ethnic relations etc. (CUTS International, n.d). It may be noted

[3]Among the seed varieties, paddy seeds, onion seeds, jute seeds, and vegetable seeds are commonly traded through different border points of Jessore, Benapole, Rajshahi, Chapai Nawabganj, Chuadanga, etc.

that informal trade in seeds takes place both through informal import (e.g. Swarna, JR 520) and informal export (e.g. BRRI 28, 29). Non-tariff barriers such as delays in customs clearance, onerous documentation requirements, transshipment, absence of fast (green) channels etc. are some of the reasons behind the presence of informal trade.

As would be recalled, the agreement on SPS measures, negotiated during the Uruguay Round, was expected to enable member countries to protect and safeguard human, animal and plant life/health and hygiene. The spirit of the agreement was to ensure this without making any discriminatory trade-restrictions (Rahman and Akhter 2014). However, misapplication of SPS provision tends also to hinder trade processes; inappropriate use of SPS measures could turn it into a formidable NTB (Deb 2007). Although trade in agricultural commodities calls for maintaining minimum thresholds of standards bearing in mind public health-related concerns, efficacy of enforcing SPS measures and quarantine requirements is quite important. Many traders had mentioned about applications of SPS requirements without the needed infrastructure support as reasons for informality in agricultural trade. Many agricultural goods are perishable in nature and need speedy customs clearance. For Bangladesh, as one study found out, time taken for export of food item to India ranged between 3 and 35 days (Rahman et al. 2015). A study revealed that delays and operational inefficiency in ensuring proper implementation of SPS measures leads to (a) fall in product quality; (b) reduced shelf-life of the products; (c) high cost of doing business due to high testing, licensing and registration fees; (d) complex and expensive licence renewal procedures; (e) damage of products at the port; (f) higher clearance time; and (g) disruption in the supply chain (Rahman et al. 2015). Consequently, a part of the formal agricultural trade is diverted to informal channels.

Taking cue from the above, it is evidence that the efficiency in operational procedures concerning agricultural trade needs to be significantly improved. There are opportunities to raise efficiency at each stage of Bangladesh's agricultural import procedures (shown in Fig. 1).

Among the abovementioned products, informal trade in crop seeds has come under close scrutiny. Factors of concern are low quality, likelihood of adulteration, crop

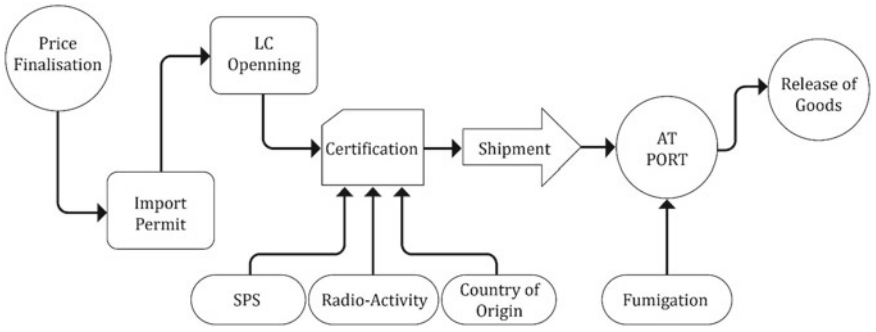

Fig. 1 Flowchart of procedures for agricultural imports. *Source* Developed by Authors' from KIIs

damage and administrative issues. It is pertinent to mention here that rice is a notified crop which means that, without government release, rice seed is not allowed to be traded formally. Only if National Seed Board releases an approval order, a notified crop seed variety can then be traded formally (Haque et al. 2014). However, as was gleaned from the KIIs, at the micro-level farmers are not much concerned about the nature of trade (whether formal or informal). They are rather more interested to have the seed variety which matches their needs and cropping requirements. This priority on the part of farmers also encourages informality.

As it stands, Bangladesh has lacking in terms of the supply of wheat and jute seeds, to meet domestic demand. For this reason, it is dependent on India for supply of seeds of various types. Anecdotal information suggests that though import of jute and wheat seeds has been on the rise through formal channels, a good share of this still takes place through the informal mode.

In most cases, traders who use informal channel are not able to transport the seeds with appropriate packing and needed labelling, by maintaining required standards of humidity and other weather parameters. The risk of interception by law enforcing agencies remains a recurring possibility. Consequently, the likelihood of deterioration in quality and adulteration is higher in case of informal trade. Consequently, such seeds are subject to threats of pest attack and Germanisation. There is always a danger of adulteration of the indigenous seed varieties. Food security and safety thus are undermined when seeds are traded informally. This is also risky for farmers as they don't have the opportunity to claim damage when the seeds are contaminated or adulterated.

To reduce informal trade in seed, cooperation between Bangladesh and India as regards harmonisation of seed standards and certification has now assumed heightened importance. This would particularly benefit small- and medium-scale farmers who need good quality seeds to ensure high yield. It is to be noted in this connection that the governments of Bangladesh and India have taken some initial steps towards mutual recognition of standards. There is only marginal difference as regards seed standards prevailing in the two countries (Haque et al. 2014). Indian requirements are somewhat more stringent but there is ample opportunity for harmonisation of standards.

In the context of the above, operationalisation of the SAARC Seed Bank (SSB) could enable the member countries to collaborate with each other in the development of a list of common variety of seeds. At the same time, the need to preserve local/indigenous varieties should be recognized, as appropriate. Regional efforts should help establishment of a 'Common Minimum Seed Quality Standard' (CMSQS) and 'Seed Testing Procedures' may be put in place in accordance with the procedures recommended by the International Seed Testing Association (ISTA). In addition, discussion on longstanding issues such as common seed certification system and standards, designated laboratories to improve seed testing, harmonisation and standardisation of acts, rules and regulations may be pursued with the objective of ensuring safe and higher food production in the region. These steps will also help reduce informal cross-border trade in seeds.

It is pertinent to recall here that some progress has been made as regards harmonisation of standards of a number of products under the purview of the South Asian Regional Standards Organization (SARSO). In April 2017, Food Safety and Standards Authority of India (FSSAI) issued a notification (File No. 1-1371/FSSAI/Imports/2015-Part 5) authorising the Bangladesh Standards and Testing Institution (BSTI) to issue testing certificates concerning imports of 21 agricultural products from India.[4] SAFTA mechanism and bilateral discussions should be geared towards resolving the disputes as regards NTBs which impede the growth of trade in agri-products in South Asia and encourage move to informality.[5]

4.2 Informal Cattle Trade

Cross-border informal cattle trade between Bangladesh-India is an important business, both in terms of number and value. Some have argued that it is worth USD 500 million per year (Bhattacharjee 2013). India is by far the most important partner, although Bangladesh also has some informal cattle trade with Nepal and Myanmar. According to one estimate, 98% of cattle traded through the informal channel were sourced from India (Khatun et al. 2016). Arguments concerning cattle trade are informed by both economic and non-economic factors (religious, political and humanitarian issues). It is to be noted that, from the Indian side, cattle export is banned. From the Bangladesh side, import takes place under quasi-legal provision. Smuggled cattle become legal in Bangladesh if it is shown that the animal was found unclaimed and roaming near the border. Under this arrangement, each year, around 15 million cattle come to Bangladesh from India through informal channels (Bhattacharjee 2013). Taking recourse to this legal provision, an individual (cattle trader) can claim ownership of the animal by paying a Tk. 500 as customs charge.[6]

This arrangement has allowed the Bangladesh customs to collect revenue, the smugglers/cattle traders to smuggle in cattle and make profit, the consumers to get meat at relatively lower prices and the leather industry to access leather at low prices. Of the total production of hides and skins in Bangladesh, 50% is consumed locally and rest 50% is exported to 53 countries in the form of semi-finished leather (75%) and finished leather (20%) (Moazzem and Sehrin 2015). This would mean that the export-oriented leather and footwear sector is also a beneficiary, albeit indirect, of the informal cattle trade. The multiplier impact of the informal trade to the Bangladesh

[4]These include fruit juice, jam, jelly, marmalade, pickles, chutney, fruit drinks, sauce, tomato ketchup, fruit syrup, squash and cordial, edible gel, tomato paste, biscuits, chanachur, noodles, instant noodles, water, soft drink powder and carbonated beverages.

[5]Recently, India has also imposed anti-dumping duty ranging from USD 19.0 to USD 351.7 per ton on jute goods and from USD 27.8 to USD 91.5 a ton on hydrogen peroxide from Bangladesh. Anecdotal information suggests that India may impose anti-dumping duty also on fishing nets export from Bangladesh.

[6]For small ruminate, the rate is Tk. 200 and for horse it is Tk. 6000.

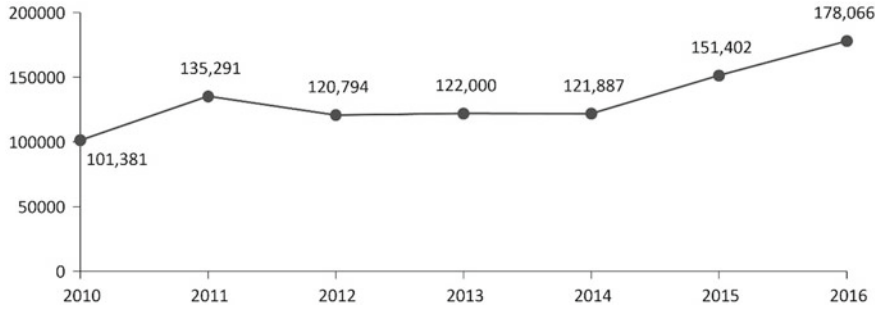

Fig. 2 Year-wise number of cattle seized by BSF. *Source* Authors' compilation based on the special issue of ORF (2013), The Economic Times (2015) and Mail Today (2016) (Rahman et al. 2018)

economy through access to protein and availability of cheap leather was significant (Bhattacharjee 2013).

In recent years, particularly with the change in Government of India in 2014, the issue of cattle smuggling has gained renewed attention.[7] In 2015, Border Security Force (BSF) seized over 0.15 million cattle in border areas—this was about 24% higher than the previous year. In 2016, the number rose to about 0.18 million (Fig. 2). However, anecdotal information from concerned players at the border suggests that this may only be about 5–10% of the total cattle traded informally through the border points.

Information collected through KIIs also suggests that due to high patrolling of BSF at border points incidences of cattle trade has dropped further in FY2016–17. Although perception tends to vary as regards the number, there is a broad agreement as regards declining numbers in recent years. This number is estimated to be significantly lower in FY2016–17 compared to those of the previous years of FY2012–13 and FY2013–14 when the National Board of Revenue (NBR) collected revenue against 2.1 and 1.9 million cattle-heads, respectively. It is, however, reckoned that the recorded number of animals passing through Bangladeshi border points accounted for only 30–40% of the total number of cattle traded through informal channels (Khatun et al. 2016). An upward trend in the retail (weekly) price of beef in Bangladesh (by using DAM data) also indicates towards the shifting supply-demand dynamics due to the high vigilance of BSF along the various cattle movement corridors.[8] During the KIIs, some have argued that this had a positive impact since it has resulted in positive domestic supply-side response. As Fig. 3 indicates, the price of beef had significantly raised to over Tk. 450 per kg in early 2017 from Tk. 270 per kg in July 2014 (a 66.6% rise over a span of about three years). Indeed, in some places in Bangladesh, the price has risen even to Tk. 500 per kg in recent times.

[7]The new government took a stance to discourage smuggling of cattle across the Indian border.

[8]It is reckoned that there are 68 smuggling corridors and 149 sensitive villages along the West Bengal border alone. Besides, the riverine borders, the char areas, were ideal transit points for smugglers. Cattle are mostly brought from far-off places like Rajasthan, Punjab, Himachal Pradesh, Haryana, Uttarakhand, Madhya Pradesh, Utter Pradesh and Bihar (Bhattacharjee 2013).

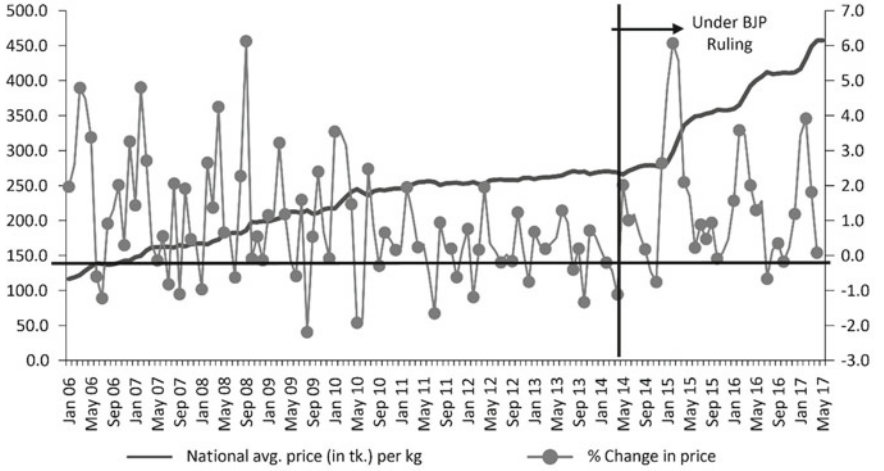

Fig. 3 Retail (weekly) price of per kg 'beef' in Bangladeshi markets. *Source* Authors' calculation by using DAM Data (2017)

Information collected from KIIs suggests that despite strong vigilance by BSF along the involved corridors, cattle trade remains an ongoing reality in many of the corridors through the organised informal chain of supply. In FY2016–17, about 154,251 animals were traded through only three corridors of Rajshahi, of which 82.3% were cow, 17.2% were buffalo and the others were small ruminants.[9] It is a well-known practice that, usually the cattle smuggler, who is well-informed of the lucrative profit margin, regains the ownership of the seized cattle by bidding the highest price in the auction (following seizure and auction on the Indian side). One estimate indicates that a cattle head which is sold at USD 10–50 in India is sold at as much as USD 300 to USD 600 in Bangladesh. Anecdotal information received from cattle traders in Bangladesh during one of the KIIs revealed that, at present, a cattle fetches about USD 110 for 37.3 kg equivalent meat. It was also mentioned that although the price margin between two countries was quite high, each actor in the process gets only a part of the overall profit. Larger part of the transhipment of the cattle across the border is carried out by low-key handlers, mostly living in border areas. During the KIIs, cattle traders revealed that when customs corridors remain open, through informal arrangements, the average transhipment charge for movement of a pair of cattle was about USD 100; when closed, this could rise even by 10 times.

After analysing the abovementioned information and data, the present study has attempted to come up with a rough estimate of cross-border informal cattle trade. Following the assumption and methodology presented in Annex, the informal cattle

[9]Similar information has also been published in newspaper articles in recent years. In FY2014–15, through the Rajshahi corridor alone 90,087 cows and 47,809 buffaloes were traded while in FY2015–16 in the first eight months the number of recorded animals traded were 404,883 cows, 50,226 buffaloes and 10 goats (Dulal 2016).

Table 2 Estimated value of informal cattle trade (in million USD)

Animal type	Assumed price (Tk.)	Average quantity	Total trade (in million Taka)	Total trade (in million USD)	Non-reported cattle-heads	
					Low (70%)	High (60%)
A	B	C	D	E	F	G
Cow	20,000	138,985	27,797	347.5	–	–
Buffalo	20,000	163,939	3279	41.0	–	–
Small ruminant	3000	3005	9	0.5	–	–
Total value of informal cattle trade			31,085	390	620	660

Source Authors' estimation

trade is roughly estimated to be USD 620 million to USD 660 million per year (Table 2). The estimated value is equivalent to 38–40% of Bangladesh's formal agricultural trade with India in FY2015–16. When compared with SAARC countries, it is equivalent to 36–37.8% of Bangladesh's formal agricultural trade in FY2015–16. Thus, the amount is significant by any measure.

A nagging concern associated with cattle trade is the danger of transmission of highly contagious and transmissible transboundary animal diseases (TADs). This danger is accentuated because Bangladesh has a history of such diseases including Foot and Mouth disease (FMD), Peste des Petits Ruminant (PPR), Anthrax, Black Quarter (BQ), and Avian Influenza (AI) (Otte et al. 2004; Khatun et al. 2016).[10] It is widely known that livestock movements and trade play an important role in the spread of FMD (Knight-Jones and Rushton 2013 and Sutmoller et al. 2003). Due to informality of the overwhelming part of cattle trade and absence of any clinical or physical inspection at the border points, breakout of FMDs and Anthrax remains a high possibility. Indeed, anthrax had caused the death of hundreds of cattle in Bangladesh during the 2009–2012 (Samad 2013). This is also corroborated by Khatun et al. (2016). At the time of KIIs, it was frequently mentioned that there was high incidences of cattle disease particularly during the Eid-ul-Azha time. The estimated cost would vary across countries of South Asia but is considered to be significant. The direct losses alone due to FMD in India was estimated to be more than USD 4.5 billion per year; indirect production losses could be much more (Venkataramanan et al. 2006). According to the DLS, Bangladesh loses as much as USD 125 million annually due to FMD (FAO 2016). While it is difficult to apportion the losses due to informal cattle trade, informed sources feel that the amount would be considerable.

[10]Some of the TADs are zoonotic which means that the virus transmits from the animal to human body and cause threat to public health. Others are non-zoonotic but cause severe losses in reproduction, lactation, growth and draught power.

Actual cost of disease prevention and control depends on the type of specific disease which includes the cost of treatment, surveillance and detection including quarantine at the port of entries, public communication, stamping out operation including decontamination, vaccines and vaccination campaign, improved bio-security and management, compensation and overhead cost of state veterinary services. In addition, appropriate estimation of the economic loss must factor in the loss of milk, abortion, mortality, loss of drought hours and loss of manpower. In the absence of comprehensive data, arriving at reliable estimation of the potential losses is not easy. Although Bangladesh has put in place the Animal Product Quarantine Act, there is lack of adequate actions to combat transboundary animal diseases. In view of the emergent scenario, this has become highly necessary.

4.3 A Border Haats as Opportunities to Reduce Informal Agricultural Trade

In recent years, a number of border haats (BHs) have been established along the Bangladesh-India (also Bangladesh-Myanmar) border to facilitate trade in border areas, and also to address the issue of informal trade. The BHs allow a number of agricultural commodities to be traded legally in designated areas along the border. These include locally produced vegetables, food items, spices, processed food items, fruit juice; minor forest commodities, e.g. bamboo, bamboo grass and broomstick but excluding timber; small household and agricultural tools, e.g. dao, plough, axe, spade, chisel, etc. Information collected from the field visits and KIIs suggests that the share of agricultural commodities traded in the BH is about 15–20% of the total traded value. However, the share tends to vary widely across the BHs. Official data collected from the Tarapur-Kamalasagar BH indicates that, on average, a Bangladeshi vendor sells about USD 106.0 worth of goods on a typical Haat (market) day; the amount is reported to be eight times higher for Indian vendors. Among the agricultural commodities dry fish, seasonal fruits and banana are commonly traded items in Tarapur-Kamala Sagar BH; some live fish, vegetables, fruits (mainly orange) were reported to be traded regularly in Chhagalnaiya (Feni)-Srinagar (Agartala) BH; ginger, turmeric, banana and a notable amount of betel nuts are observed to be traded in the Baliamari (Kurigram)-Kalaichar (West Garo Hills) BH; and local vegetables, some spices are traded through the Lauwaghar (Sunamganj)-Balat (East Khasi Hills) BH. In FY2015–16, the annual sale by Bangladeshi vendors in the Tarapur-Kamalaganj BH was about USD 0.14 million (UNO office, Kasba). Assuming an eightfold higher sales revenue, the annual trade value by Indian counterpart would be around USD 1.1 million per year. Considering that trade in each of the rest of three BHs is equivalent to Tarapur-Kamalasagar BH, the total value of trade in BHs would be USD 5.1 million per year. Of this, value of agricultural trade would be only between USD 0.75 and USD 1 million. However, the amount may be somewhat of

an overestimation as the purchasing power of people in other BHs is rather low in comparison with that of Tarapur-Kamalasagar BH area.

It was observed that there are high demands of live fish, eggs and other poultry items, fresh vegetables and spices, sugar and crop seeds and fertiliser from both Bangladeshi and Indian population living on both sides of the borders. Though there are provisions that allow inclusion of new items, on the basis of mutual consent, trade in products require approval from respective national quarantine authorities. Infrastructure facilities at BHs are rather rudimentary; these will need to be upgraded if scaling up is to be allowed. In addition, there are issues of revenue earning loss as these markets are exempted from customs duties. However, regular record keeping of trade volume and reporting to the respective Commerce Ministries on weekly basis are required. A comprehensive assessment of the economic and welfare benefits accrued from BHs should be undertaken to assess the overall impact of BHs. This will then help policymakers to take decision as regards increasing the number and expanding product coverage of BHs.

5 Recommendations

The preceding discussions indicate that bordering countries in the SAARC should take necessary steps to deal significant informal border trade that currently takes place in agricultural goods and cattle. Several factors are of concern here: quality assurance, quarantine infrastructure, prevention of transboundary communicable diseases, generation of the needed information, and coordination among concerned parties. Based on the discussion, such steps can be categorised as follows.

5.1 Institutional and Policy Initiatives

Initiatives should be taken to sign bilateral and region-wide SPS Agreements. Mutual recognition agreement (MRA) should be an integral part of such Agreement.

- There is a need to strengthen customs capacity on both sides of the border to identify misinvoicing concerning trade in agri-products. Cross-border customs cooperation will need to be strengthened to address this.
- To reduce volatility, SAARC countries should come to an agreement not to take protectionist measures in times of supply shocks, agricultural price fluctuations and natural disasters.
- The standard operating protocols in view of the Bangladesh-Bhutan-India-Nepal Motor Vehicle Agreement (BBIN-MVA)[11] should include provisions for speedy

[11] It is hoped that Bhutan, which is yet to ratify the agreement, will also join it at a later stage.

clearance of cargo containing perishable agricultural items. Introduction of green channels may be considered in this connection.

- In view of the popularity of Border Haats, there is a need for joint assessment of the demand-supply situation, product coverage and pricing patterns, bearing in mind the need for further expansion of BHs in future.
- SAARC should develop an institutional Dispute Settlement Mechanism (DSM) to deal with non-tariff-related complaints and disputes relating particularly to trade in agri-products.
- SAARC countries can think of developing coherent SAARC-wide strategy to project a common stance in the WTO as regards negotiation in the context of Agreement of Agriculture (AoA).

5.2 Standardisation and Certification

- SARSO should be further strengthened to enhance its capacity to develop regional harmonised standards and certification. Bangladesh could make use of the Indian line of credits (LoCs) in this respect (in addition to projects under the first LoC to strengthen the BSTI).
- Measures should be taken towards operationalisation of the SSB. Cooperation among SAARC countries will need to be strengthened to develop common SPS standards for seeds. This will help the concerned member countries to facilitate to small and marginal farmers to have access to quality seeds. As a result, informal trade in crop seeds should come down; risk of crop damage and adulteration will also be reduced.
- A regional project may be put in place to strengthen the capacity of quarantine departments in each country and standardise SAARC-wide procedures in this respect.

5.3 Infrastructure

- Tracing mechanisms should be strengthened to cater to the new demand for ensuring quality and traceability. Cool chains will need to be developed for transportation of perishable agricultural products.
- Bangladesh should install adequate facilities for health check-up of animals at major trade corridors in order to reduce the possibility of transboundary transmission of FMD, Anthrax, PPR and other zoonotic and non-zoological animal diseases.

- There is a need to develop agro-based value and production chains by attracting investment in order to realise the preferential market access in agricultural items offered under bilateral initiatives and SAFTA.
- Modernisation of quarantine procedures and inspections should be undertaken on an urgent basis. Designated channel (green channel) should be introduced for trade in (perishable) agricultural commodities. Speedy implementation of ongoing projects to strengthen capacity at various Land Customs Station (LCS) to deal with plant and animal quarantine should be ensured.

5.4 Data Needs

- A regional project should be designed to conduct a comprehensive livestock census by respective National Statistical Organizations, with coordination between DLS and Department of Fisheries (DoF) (and other relevant authorities). This will help to develop a national as well as a regional database for livestock management by following the same framework. The information generated will help trans-border management of diseases concerning livestock and fisheries. This will also help undertake joint actions to mitigate common diseases. The database will support the cause of regulations cross-border trade in animals in an informed manner.

6 Concluding Remarks

A study of Bangladesh's informal trade in agriculture with SAARC member countries is important for several reasons—persistence of informality, risks involved particularly in view of quality of the tradables and spread of transboundary communicable diseases and the need to identify initiatives that will mitigate the risks and incentivise formality in agricultural trade of Bangladesh. The present study has made an attempt to capture some of the trends and the resultant implications in this regard and has put forward a number of initiatives that Bangladesh's policymakers should pursue in the areas of policy measures, institutional strengthening, addressing infrastructure needs and generating data. More in-depth investigation is required in order to come up with comprehensive data and information which will help design coordinated region-wide policies towards formalisation of agriculture trade in South Asia.

Annex: Detailed Methodology for Estimating Informal Agricultural Trade

Methodology: Estimation of Agricultural Trade Misinvoicing

To estimate the value of trade misinvoicing, method of estimating international financial flow (IFF) developed by the Global Financial Integrity (GFI) has been followed. Data used for the estimation were taken from Trade Map for the period of 2001–2016. By using Eq. (1), import trade misinvoicing between Bangladesh and SAARC countries at time t was calculated. To smoothen the variability in trade misinvoicing, three-year moving average was taken as the actual misinvoice value concerning Bangladesh's import of agricultural items from the SAARC countries.

$$\mathrm{ID}_{\mathrm{BD,SAARC},t} = I_{\mathrm{BD,SAARC},t/r - X_{\mathrm{SAARC,BD},t}} \tag{1}$$

$$\mathrm{ID}_{\mathrm{BD,SAARC},t} = \left(\mathrm{ID}_{\mathrm{BD,SAARC},t-2} + \mathrm{ID}_{\mathrm{BD,SAARC},t-1} + \mathrm{ID}_{\mathrm{BD,SAARC},t}\right)/3 \tag{2}$$

Here,

$ID_{\mathrm{BD,SAARC},t}$	means import trade misinvoicing between Bangladesh and SAARC countries t
$I_{\mathrm{BD,SAARC},t}$	imports by the Bangladesh from SAARC countries at time t
$X_{\mathrm{SAARC,BD},t}$	SAARC's exports to Bangladesh at the time t
r	factor margin assumed by GFI at l0%.

Methodology and assumption: Estimation of Informal Cattle Trade

In order to estimate the value of cross-border informal cattle trade between Bangladesh and India, the following steps were taken: (a) official data for cattle heads were collected from NBR for the period of FY2010–11 to FY2013–14. For smoothening the variability in year to year data, the four-year average number of cattle heads, by animal type, has been taken (column A). Column B shows cattle price which was taken as a priori value (minimum) from the study, Bhattacharjee (2013). Taka to USD conversion was made using the exchange rate of BDT 80 per USD (column E). A number of non-reported cattle heads (columns F and G) were taken as a priori condition reported in the primary survey-based study by Khatun et al. (2016). However, these estimates are subject to the following caveats: (a) estimated results are linear in nature; (b) assumptions are to be taken cognisance of since change in one of the assumptions will change the results; (c) one may also argue that

the estimated values are either underestimated or overestimated depending on the omission or inclusion of relevant or irrelevant variable.

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Chapter 14
Informal Trade in the SAARC Region

Nisha Taneja and Samridhi Bimal

Abstract Despite consistent efforts towards trade and investment normalization, South Asia remains one of the least economically integrated regions in the world. While formal trade in South Asia is abysmally low, informal trade has been a persistent feature of the region and continues to thrive. Analysts regard this growing informal trade to be one of the key reasons for low intra-regional trade in South Asia, making this issue an important subject of study in the region. If such trade is shifted to formal channels, a substantial increase in regional trade is likely to occur. This paper provides a critical assessment of the existing literature on informal trade in South Asia. It gives a comprehensive overview of the magnitude and composition of such trade in the region, identifies the factors underlying such trade and delineates future research areas on this topic so that policy makers can adopt trade facilitation measures which would reduce informal trade flows in the region.

1 Introduction

Despite repeated efforts towards trade and investment normalization, South Asia remains one of the least economically integrated regions in the world. While formal trade in South Asia is abysmally low, informal trade has been a persistent feature of the region and continues to thrive. Analysts regard this growing informal trade to be one of the key reasons for low intra-regional trade in South Asia making this issue an important subject of study in the region. If such trade is shifted to formal channels, a substantial increase in regional trade is likely to occur.

India is the largest economy in the South Asian region accounting for more than 80 per cent of South Asia's gross domestic product (GDP). Owing to its economic size and central geographical location in the region, India is a key actor in informal trade in the region. It is the only country, which shares its border with almost all

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the South Asian countries, and at the same time, no country shares its border with countries other than India. All informal trade in SAARC is known to exist between India and its South Asian neighbours.

The objective of this article is to provide a critical assessment of the existing literature on informal trade in South Asia along with a comprehensive overview of the magnitude and composition of such trade in the region, thereby identifying new and important issues that future research on this topic needs to look at.

2 What Is Informal Trade?

To analyse estimates of informal trade in South Asia, it is imperative to examine how economists have defined such trade flows. OECD (2009) defines informal trade as "trade in legitimately produced goods and services, which escapes the regulatory framework set by the government, as such avoiding certain tax and regulatory burdens". Informal trade thus refers to goods traded by firms that are unrecorded on official government records and that fully or partly evade payment of duties and charges. Such goods include those that pass through unofficial routes and avoid customs controls, as well as goods that pass through official routes with border crossing points and customs offices yet involve illegal practices. Such practices comprise under-invoicing (i.e. reporting a lower quantity, weight or value of goods to pay lower import tariffs), misclassification (i.e. falsifying the description of products so that they are misclassified as products subject to lower tariffs), mis-declaration of the country of origin or bribery of customs officials. The only way to detect fake or false invoicing is by using partner country data comparison, i.e. by comparing the gap between reported exports and import data of partner countries. However, in the case of South Asia, this may be not effective since trade recording systems of developing countries are poor. It is also a common practice to fake the invoice at both ends of international trade (Taneja 2002).

Therefore, in the South Asian context, most of the studies have defined informal trade flows as unrecorded trade that should be included in the national income statistics, according to conventional national income accounting, but is not (Pohit and Taneja 2000; Taneja et al. 2004). Such trade could pass through formal channels which are designated official points of trading, or goods could move across the length of the borders which are very permeable and escape the state machinery.

3 Existing Evidence on Informal Trade in SAARC

Evidence of the presence of informal trade flows between India and its South Asian neighbours can be gathered from survey-based research studies conducted between 1995 and 2016. Interestingly, the studies conducted between 1995 and 2005 are country-level studies focusing on estimating the volume of informal trade between

a pair of South Asian countries and identifying the major commodities which are traded informally. These include Chaudhari (1995), Rahman and Razaqque (2002), Pohit and Taneja (2000) and World Bank (2006) for India-Bangladesh trade; Khan et al. (2007) for India–Pakistan, Taneja et al. (2004) for India-Sri Lanka and Rao et al. (1997) for India's informal trade with Bhutan and Myanmar.[1]

However, post 2005 there appears to be significant focus on sector and product-specific studies, particularly in food, agriculture and related commodities, especially for exports from India. For instance, Karmacharya (2010) focuses on India's informal trade in agricultural commodities and finds that such informal trade between India and Nepal is quite substantive. There are also few product-specific studies such as Bhattacharjee (2013) that examines the magnitude of cattle smuggling across the Indo-Bangladesh border, Pursell (2007) that examines sugar smuggling into Bangladesh from India, Joshi et al. (2012) that study informal exports of fertilizers from India to Nepal and USAID and EAT (2014) that point out the informal export of rice into Bangladesh, import of rice seeds from Bangladesh and India's informal exports of rice as well as rice and maize seeds to Nepal. A more recent CUTS (2015) study identifies informal trade in agricultural inputs and outputs, especially in cereal seeds and machineries.

During this period, two country-level studies have been conducted for India and Pakistan (Ahmed et al. 2013; Taneja and Bimal 2016). There are also some studies that focus on sub-regional informal trade between Indian states and partner countries—Choudhary and Ghosh (2014) for Bihar–Nepal trade, Chanda (2013) for informal West Bengal–Nepal trade and Nath (2010)[2] for Tripura–Bangladesh trade.

While the level of aggregation of the studies has changed, most of them have focused on quantifying informal trade and identifying the major commodities which are traded informally, investigating the main factors that incentivize these flows, describing the main routes and modes on which informal trade takes place and examining the institutional framework that supports it.

There are advantages associated with conducting studies at different levels of aggregation. While the country-level studies provide a macroeconomic and overall country perspective, the sector- and product-specific studies, though limited in coverage, enable in-depth analysis highlighting the problems associated with that sector/product, linking it to government policies pertaining to that particular sector/product, identifying drivers facilitating informal trade and providing practical and focussed suggestions to shift the informal flow of trade to formal channels. Sub-regional analysis is not very useful, especially for a region as heterogeneous as South Asia, but it can serve as a valuable addition to the country and sector/product-level study. The problem in the existing literature is that on one hand we have studies that were conducted pre-2005 which focussed on country-level analysis but did not go in-depth and on the other hand we have studies that were conducted post-2005

[1]There are no records of India's informal trade with Afghanistan and Maldives, the other two SAARC members. But there appear to be significant informal imports from China into India coming via Nepal, although there is no study that has assessed these trade flows.

[2]Unpublished.

studies which were in-depth for a particular sector/product but did not place it in an overall country or sub-regional perspective. These three levels of aggregations need to be complementary in nature, and a study looking at all levels of aggregation is what is needed to provide a more comprehensive view of the situation of informal trade in South Asia.

4 Methodology and Estimates of Informal Trade

The estimation of informal trade is based on secondary and primary data. Secondary data has been used to undertake partner country data comparisons in the context of Central Asia (Kaminiski and Mitra 2011). However, as mentioned earlier, owing to the inadequate and non-uniform reporting practices of trade data in the region, partner country data comparison is an inappropriate method to estimate informal trade in South Asia. For collecting primary data, techniques in the form of border monitoring, stock taking and tracking have been extensively used to estimate informal trade in Sub-Saharan Africa (Ackello-Ogutu and Echessah 1997, 1998; Minde and Nakhumwa 1998). Border monitoring involves selection of popular and accessible border sites so that enumerators can use the observed data at these points to estimate annual volumes of unrecorded trade between countries. A tracking technique is often used in combination with the border monitoring approach. An unrecorded sample of containerized vehicles and trucks is traced to gather information regarding mode of movement, origin, destination, nature and value of goods transported. The stock-taking technique requires quantification of trade figures by taking into account the volume of goods brought to the market by traders, volumes purchased and carry-over stocks that would be treated as beginning stocks for the next market day. This technique involves the observation of traders and a survey of warehouses at the border areas, to compare the observed trade data with that reported by customs. While these techniques are thorough methods of calculating informal trade, it is also more complex and difficult to undertake in the South Asian context as informal trade has aspects of illegality as well. Moreover, in South Asia, a lot of informal trade takes place through porous and long borders and is difficult to monitor, track and observe.

As a result, the most common method used to quantify informal trade in South Asia has been primary surveys. While some of the studies have used a single round survey, others have processed multiple rounds of surveys using the Delphi technique. This technique is essentially a set of procedures for eliciting and refining the opinions of a group of respondents over successive rounds of interviews. The responses from the first round of interviews with a group of respondents are synthesized, and the results presented to each respondent of the group in the second round of interviews, to enable respondents to reconsider their responses. The responses obtained in successive rounds are based on feedback provided to the group from previous rounds. The iterations continue until a consensus emerges or until reasons for a lack of convergence are documented. Such estimates are largely based on the perception of the respondents rather than actual estimation.

The country-level estimates prepared during 1995 and 2005 are all point estimates and refer to different time periods. For India–Bangladesh, estimates of total informal trade prepared over a decade during 1992 and 1993 and 2002 and 2003 range between US$215.3 million and US$500 million (Chaudhari 1995; Rahman and Razzaque 2002; World Bank 2006). For India–Pakistan, estimates of informal trade prepared during 1996 and 2005 ranged between US$ 100 million and US$ 2 billion (Khan et al. 2007; Government of Pakistan 1996). Estimates for India's informal trade with Sri Lanka and Nepal prepared for 2000–2001 were US$ 208 million and US$ 408 million, respectively (Taneja et al. 2004). Estimates for India's informal trade with Bhutan prepared for 1993–1994 were US$ 32.5 million (Rao et al. 1997). A key finding of these studies was that India has a trade surplus with Bangladesh, Pakistan, Sri Lanka and Bhutan on the informal trade account, while with Nepal it had an almost balanced trade.

Recent estimates of informal trade in studies post 2005 are summarized in Table 1. Estimates of India's informal exports to Pakistan prepared during 2013 range between US$ 1.79 and 3.99 billion. Nath (2010) estimates informal trade between Tripura and Bangladesh and finds total informal trade to be US$ 500 million for the year 2011–2012. In an exclusive study on India's agriculture sector, Karmacharya (2010) estimates India's informal exports to Nepal in agriculture sector to be US$ 651 million. Bhattacharjee (2013) quantifies the magnitude of cattle smuggling across the Indo-Bangladesh border to be US$ 500 million annually. Pursell (2007) estimates

Table 1 Recent estimates of India's informal with South Asian partners (US$ million)

Country pair	Study	Year	Informal exports	Informal imports	Total informal trade
Country-level					
India–Pakistan	Ahmed et al. (2013)	2013	1789	–	–
	Taneja and Bimal (2016)	2013–2014	3992	721	*4713*
Sub-regional level					
India–Bangladesh	Nath (2010) (Tripura only)	2011–2012	360	140	*500*
Sector-level (agriculture)					
India–Nepal	Karmacharya (2010)	2010	651		
Product-level					
India–Bangladesh	Pursell (2007) (sugar)	2003–2004	70–100		
	Bhattacharjee (2013) (cattle)	2012–2013	500		

Source Authors compilation

sugar smuggling into Bangladesh from India and pegs the value to range between US$ 70 and 100 million.

One of the biggest shortcomings of available evidence on informal trade is that all the existing studies have been conducted at different points in time, ranging from 1995 to 2016. Also, except for a couple of studies conducted for estimating the value of total informal trade between a pair of South Asian countries between 1995 and 2005, not much work has been done on this in the last ten years. Therefore, it is neither possible to estimate the extent of total informal trade in South Asia nor get a comparative estimate for trade with different partners. So, a comprehensive study assessing India's informal trade with different partners, at the same point in time, is needed.

5 Commodity Composition of Informal Trade

Different commodities that are informally traded, as identified in the recent literature, have been summarized in Table 2 below. It can be seen that agriculture items, especially rice, wheat, pulses and sugar, are the major commodities exported informally by India to South Asian neighbours.

Although it is evident from existing literature that there is significant informal trade in agricultural commodities, only one study by Karmacharya (2010) focuses on estimating these trade flows. In most other studies, agricultural items have been identified but there has not been an exclusive focus on agriculture informal trade. Since the population of informal traders is unknown, most of these studies are based on primary surveys using a purposive sample. Preparing a sample based on knowledge collected on the agriculture sector could yield more focused results even though they may be biased. There is scope for further work on informal trade focusing exclusively on agriculture.

6 Factors Influencing Informal Exports

In order to understand the factors driving informal trade, most of the existing studies have relied on the framework for analysis developed by Pohit and Taneja (2000). Drawing insights from the literature on the new institutional economics (NIE), the studies argue that thriving informal trade in the South Asian region suggests that there is an institutional mechanism which supports such trade. The NIE framework rejects two crucial assumptions of neoclassical economics, namely costless transactions and perfect information and stresses on the role of institutions in facilitating market exchange by reducing transactions costs, providing a predictable framework for exchange and overcoming imperfect information (Assaad 1993; Bardhan 1989; Williamson 1985). They also focus on the role of ethnic trading networks in developing societies as an institution that helps traders economize on their transaction

Table 2 Summary of items that are informally traded

Country pair	Study	Year	Identified informal exports	Identified informal imports
India–Bangladesh	Nath (2010)	2011–2012	• Cows and buffaloes, fertilizers, jackfruit, ginger, fish (Andhra Pradesh), tea, sugar, bamboo, Banana, potato, tobacco, biri (country cigarette), dry fish, cumin seeds, pineapple	• Fish, garlic, eggs, palm and refined oils, goat, rubber (Malaysia), peas, betel nut, vegetables, cinnamon, dry grapes, onion, domestic birds, flowers, food for poultry farms, chicken
India–Pakistan	Ahmed et al. (2013)	2013	• Fruits and vegetables, spices and herbs, tobacco products • Textiles, jewellery, tyres, cosmetics	–
	Taneja and Bimal (2016)	2013–2014	• Real jewellery, textiles, machinery and machine parts, electronic appliances, scraps, paper, chemicals • Tobacco products, small amounts of packaged food, spices and pulses	• Textiles, fry fruits, spices, cement, carpets, fruits and vegetables
India–Nepal	Karmacharya (2010)	2010	• Paddy, rice, sugar and edible oils, Musoro, fish, poultry, powder milk and oilseeds, maize, chana, arhar, banana, chilli, onion, jira, buffalo, goat, potato and tea	• Betel nuts, hides and skins/leather, apple and garlic and ginger Other smaller imports include oranges, large cardamom, onions, turmeric, pig, poultry and powder milk and jute/jute products

Source Authors compilation

costs. Studies such as Taneja (1999), Pohit and Taneja (2000), Taneja and Pohit (2002), Pohit and Taneja (2003) and Taneja (2005), Taneja et al. (2005) argue that while both institutional arrangements, i.e. the formal and informal, facilitate trade in goods across countries, transactions costs of conducting trade may differ. These costs include those of organizing, maintaining and enforcing the rules of an institutional arrangement.

Therefore, in the existing literature, there has been a lot of focus on transaction costs of trading as one of the most important reasons for informal trade (Pohit and Taneja 2000; Taneja et al. 2005). A common finding across most studies is that transaction costs in the formal channel are higher than those in informal trading. The

inefficiencies of the formal channel relate to the high transportation costs, infrastructure bottlenecks at land customs posts, procedural delays, complexities of obtaining licences, customs clearances, paperwork, various refunds, banking and bribes. All this leads to high transaction costs which often deter traders from using the formal channels.

The second most important reason that studies have found for informal trade is prevalence of high tariffs in importing countries (Taneja and Bimal 2016). The conventional argument behind this is that illegal trade takes place due to high tariffs as they create a strong incentive to avoid the legal channel in order to evade tariffs. For instance, high duties imposed by Bangladesh on a wide range of locally produced consumer goods (including para-tariffs) are a major incentive for Indians to informally export or smuggle goods into Bangladesh, especially at customs by under-invoicing, misclassification and other practice (World Bank 2006). Moreover, if tariff differentials between countries are high, there is an incentive for the country with the lower tariff to import from the third country and re-export informally. There have been instances reporting Nepalese traders importing from the third country and then re-exporting these items informally as these goods fail to meet the rules of origin norms (Pohit and Taneja 2000).

So while most of the studies on informal trade have focused on transaction cost related and tariff evasion incentives for trading on informal channels, the role of other trade policy-related barriers and domestic policies has been ignored. Studies on informal trade need to look at a comprehensive list of factors that can incentivize traders towards informal trade channels.

Some of the possible factors that future studies should look at are as follows:

- *Compliance of standards*
  The growing importance of standards in international trade in the region cannot be ignored. Lack of checks for health and safety standards of informally traded food and herbs poses various risks to human health (Ahmed et al. 2013). This could be especially problematic because the quality of agricultural goods traded informally from India is likely to be inferior as they escape quarantine check-posts (Karmacharya 2010). Therefore, future studies should delve deeper into the risks created by this unchecked trade in agricultural commodities.
- *Commodity restrictions*
  Informal trade could take place due to imposition of restrictions on the trade of certain commodities or through trading by certain routes. One of the most important examples of this is the existence of a restrictive trade policy between India and Pakistan. Like all other regional agreements under the World Trade Organization (WTO), South Asian Free Trade Agreement (SAFTA) also requires members to offer most favoured nation (MFN) treatment to each other; however, even after SAFTA was ratified, Pakistan did not accord MFN status to India and continued to trade on the positive list allowing limited number of items to be imported. The positive list was even more restrictive for road-based trade, as Pakistan allowed only thirteen items on the positive list to be imported from India by road. In March 2012, Pakistan made a transition from the positive list

approach to a small negative list of 1209 items which are not permitted from India. However, it has continued to restrict road-based trade by allowing only 137 items to be imported from India via road. Studies on informal trade between India and Pakistan (Khan et al. 2007; Taneja and Bimal 2016) point these commodity restrictions as the primary reason for informal trade between the two countries.

- *Domestic Policy Distortions*
  Informal trade could take place due to domestic policy distortions. For example, to assess whether India's domestic policies have been responsible for incentivizing informal trade, studies need to look at the policy framework impacting different commodities. This is one important lacuna in the existing studies that future research needs to fill.
  Let us look at the example of the agricultural sector in India. With the underlying objectives of providing food security and addressing poverty, the Indian government through the Targeted Public Distribution System (TPDS) provides food grains (wheat and rice), sugar and other necessary items such as kerosene oil and edible oil to the poor through a network of roughly 500,000 fair price ration shops distributing roughly 50–55 MMT of grains annually (Gulati and Saini 2015). A trader may have the incentive to syphon off subsidized items from the public distribution system to the neighbouring countries if such commodities fetch higher prices across the border. Such instances can be found at the PDS outlets in the states neighbouring Nepal and Bangladesh in India which get their supplies from the PDS in excess of their local needs. A lot of these commodities are reportedly then exported informally to Bangladesh and Nepal.

7 Concluding Remarks

Despite its importance, the issue of informal trade in South remains largely unexplored. While some studies have been conducted to estimate unrecorded trade, research on this subject is relatively outdated. Except for a couple of studies conducted for estimating the value of informal trade between a pair of South Asian countries between 1995 and 2005, not much work has been done on this in the last ten years. Available estimates of informal trade in the existing literature pertain mostly to the years when these economies had just initiated the process of regional integration through the South Asian Preferential Trade Arrangements (SAPTAs) in which members offered limited tariff concessions. SAFTA was signed much later in 2006. Since then India has taken unilateral measures, duty-free access has been provided to the Less Developed Countries (LDCs) in the South Asian region. At the same time, non-tariff barriers in the form of quantitative restrictions are far less prevalent but have been replaced by more rigorous application of product standards which are sometimes applied in a trade-restrictive manner creating opportunities for informal trade to take place. These changes are likely to have an impact on the magnitude, composition and direction of informal trade flows in the region. Moreover,

with the recently signed Trade Facilitation Agreement, members are likely to take appropriate trade facilitation measures which can have an impact on informal trade flows.

With the change in trading environment in South Asia, the meaning and essence of informal trade have changed in SAARC. Informal trade must now be revisited in this changed context so as to examine its impact as well as possible methods for its formalization. There is a need to develop a new holistic framework for analysing this topic to be able to draw deeper insights into the functioning of informal trading markets, the reasons for the existence of informal trade and the quantification of informal trade. This will go a long way in channelizing the informal flows of trade to formal channels and thus enhance the intra-regional economic cooperation in SAARC.

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Chapter 15
A Bay of Bengal Digital Ecosystem

Bipul Chatterjee

1 Introduction

The Internet is one of the most powerful modern inventions transforming communities, countries, economies and society as we know it. The potential to connect people regardless of distance has undoubtedly brought the world closer. As the efforts to integrate South Asia continue, the possibilities of utilising the Internet as a tool to bridge the gaps of the region must be harnessed effectively if we are to see progress. This paper studies the potential of creating a digital ecosystem in the Bay of Bengal (BoB) region, in terms of the seven designated Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries—Bangladesh, Bhutan, India, Myanmar, Sri Lanka, Nepal and Thailand.

This paper attempts to produce a study similar to that jointly conducted by the Asian Development Bank (ADB), the United Nations Commission on Economic and Social Development (ESCAP) and the Internet Society (ISOC) on sub-regional Internet ecosystems and the level of progress towards achieving a digital economy in the Central Asia + five regions (Afghanistan, Armenia, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Pakistan, Tajikistan, Turkmenistan and Uzbekistan). That 2015 paper is the third in an ISOC paper series which studied the ASEAN region and the African continent.

Hence, much of the methodology and supporting philosophy of this paper is heavily inspired by 'Unleashing the Potential of the Internet in Central Asia, South Asia, the Caucasus and Beyond' by Peter Lovelock. The paper breaks down the level and nature of Internet penetration in this region over the period of 2010 to 2016/2017 (where data is available) as well as the status of Internet-related infrastructure in the region. In essence, this paper should be viewed as a collection of relevant information

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necessary to be taken into account when designing policy towards the creation of a digital ecosystem for this region.

The paper concludes with a vision for how such an ecosystem can be encouraged through a combination of infrastructure development and service provision with a focus on locally developed and supported applications catering to domestic regional needs. This would provide the low-cost and localised services that would encourage the creation of this digital ecosystem.

Before beginning with this paper there are two charts that must be looked at which provide the reason for why this topic is both crucial and timely.

The United Nations Department of Economic and Social Affairs (UNDESA) has undertaken a study providing a snapshot with relative rankings of e-government development of all Member States of the United Nations. As a composite indicator, the e-Government Development Index (EGDI) is used to measure the willingness and capacity of national administrations to use information and communication technologies to deliver public services (Fig. 1). At the very core, it benchmarks the relative position of a country in utilising e-government for the delivery of inclusive, accountable and citizen-centric services (United Nations Department of Economic and Social Affairs 2017a, b). This, in turn, provides a view of the level of penetration and acceptance of digital technologies in each of the countries.

The e-participation index is derived as a supplementary index to the UN E-Government Survey (Fig. 2). It extends the dimension of the survey by focusing on the use of online services to facilitate provision of information by governments to citizens ('e-information sharing'), interaction with stakeholders ('e-consultation') and engagement in decision-making processes ('e-decision making') (United Nations Department of Economic and Social Affairs 2017a, b).

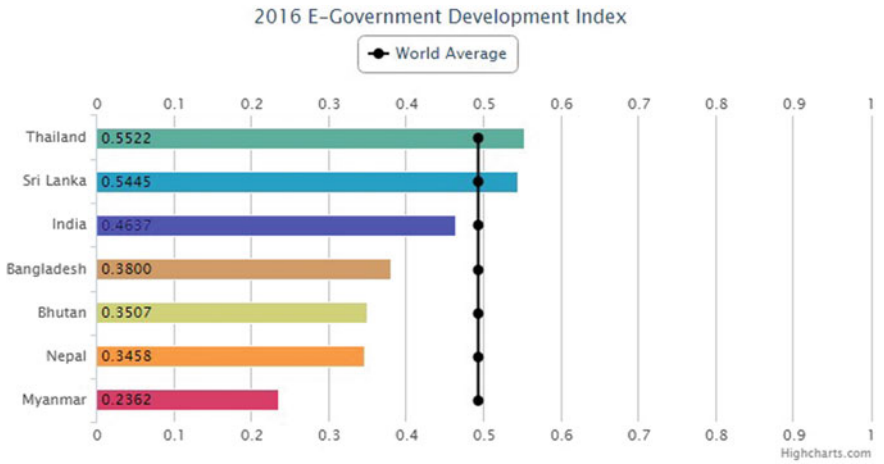

Fig. 1 2016 E-government Development Index. *Source* United Nations Department of Economic and Social Affairs (2016)

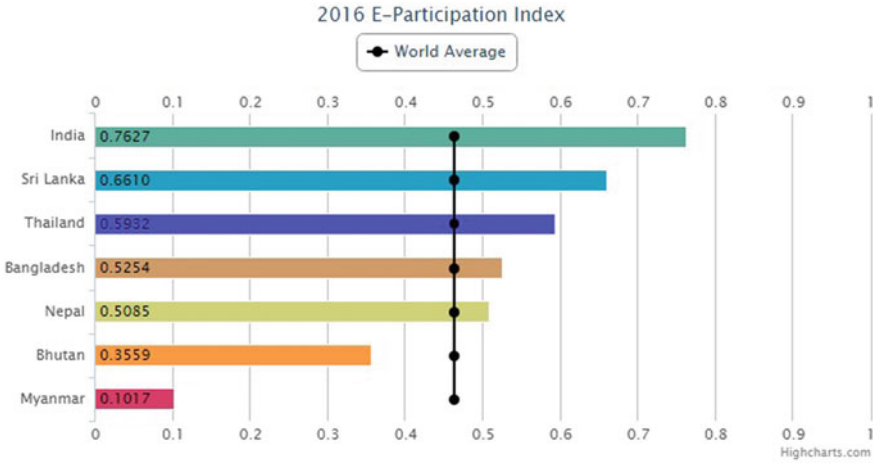

Fig. 2 2016 e-participation index. *Source* United Nations Department of Economic and Social Affairs (2016)

These figures show us that although the provision of e-government services is below the world average in most BoB countries, the e-participation levels are almost all ahead of the world averages. This tells us that the people of this region are ready to embrace digital platforms if stable, secure and well-made services are made available to them. The people of the region are not luddites simply unequipped under the present scenario. It is now up to the governments to provide the necessary infrastructure and create the right policy to harness this potential.

2 Conceptualising the Development of Internet Connectivity

To tackle the role that the Internet can play in the stimulation of development on a sub-regional level, one must first ask how the Internet, or on broader scale telecommunications, interacts with the economy? In economic terms, the Internet is a form of technology with possible national (and global even) level of effect on an economy. It can, therefore, be classified as a 'general purpose technology' as it holds the possibility to drastically alter economies through its impact on pre-existing economic and institutional structures (Rosenberg 1982).

Thinking about the Internet as a 'general purpose technology' rather than a product or good allows us to think of it beyond simple supply and demand terms and instead realise its potential as a catalysing tool to connect producers and consumers (and even the government) thereby becoming the bedrock upon which a whole new 'digital economy' can be built and sustained.

A World Bank study on this subject stated that well-developed telecom services allowed a country's firms to spend less on communications and to obtain inputs more efficiently. Strong telecom services also help firms expand into new regions and countries, allowing them to achieve economies of scale. Finally, good telecommunications can cut the costs of collecting information thereby encouraging firms to create and share knowledge and to organise into co-dependent clusters more efficiently (similar to a value chain). It benefits firms of all varieties no matter the level of technology, size and export orientation. Moreover, it benefits small and medium enterprises more than large firms. Because the Internet has high returns and is a general purpose technology, broadband technology investment is a key area of investment for developing countries (Clarke et al. 2015).

3 The Unique Nature of Supply and Demand of the Internet

The same World Bank study refers to three important indicators that underpin the level of Internet access and service in order to determine the supply side of Internet connectivity: *availability, affordability and accessibility.* These factors are used by the ISOC reports for their sub-regional Internet connectivity studies on the regions of Central Asia, Africa and ASEAN. The premise for selecting these three factors is that all three conditions need to be met to drive access and usage (Lovelock 2015). The Internet supply chain can therefore be represented as shown in Fig. 3.

However, the supply side does not adequately present reality of how Internet services grow in a region. Given the transformational impact of Internet access means that nascent or unrealised demand must be taken into account as a potential driver of growth in its own right.

This potential for bringing transformational development to a region provides an impetus to addressing nascent demand (what was thought of previously as 'uneconomic demand'), precisely because of the extended benefits that accrue to so many other areas of social and economic development by providing Internet connectivity. Hence, it is as important to focus on stimulating demand as it is on extending supply. The demand for broadband connectivity across communities in these countries will be driven by what can be done with it (e.g. access to social media, streamed content, financial services, healthcare, etc.), rather than simple availability of connectivity or

Fig. 3 Internet supply chain. *Source* Schumann and Kende (2013)

communications (Lovelock 2015). This transforms the fundamental consideration of the affordability of the service from the perspective of the user as well as the government.

From an end-user's perspective, what may otherwise appear 'unaffordable' in communications terms may, in fact, become reasonable when the access enables other basic services such as payments, education and health care. For governments, digitising key socio-economic services and providing them over the Internet is also a more cost-effective way of delivering public services. However, such e-government services will only be effective if citizens are online and are able to use them (Lovelock 2015).

On a much longer timeline, productive use of the Internet and its services can become pervasive throughout society which precedes the transformation towards a fully developed digital economy.

4 Sub-regional Overview of Internet Connectivity

As of 2017, there are 670.55 million Internet users in the BoB region. There has been massive growth in the Internet population, growing roughly seventy times between 2000 (9.48 million users) and 2017 (670.55 million users), (Miniwatts Marketing Group 2017), and however, there is a significant disparity between the countries of the region (Fig. 4).

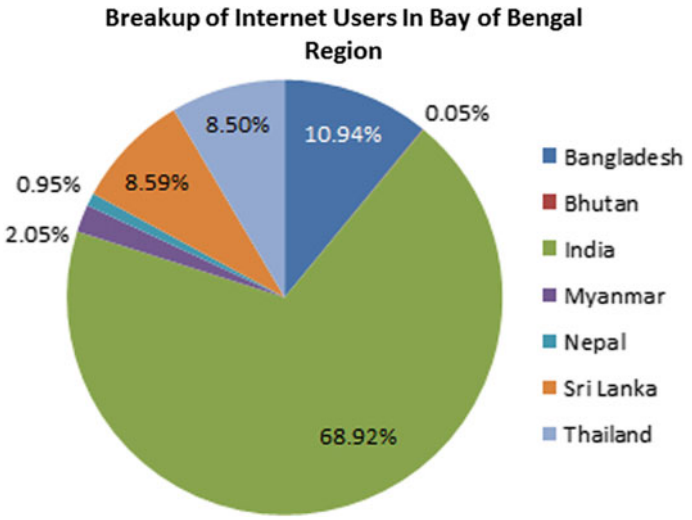

Fig. 4 Breakup of Internet users in Bay of Bengal region. *Source* Miniwatts Marketing Group (2017)

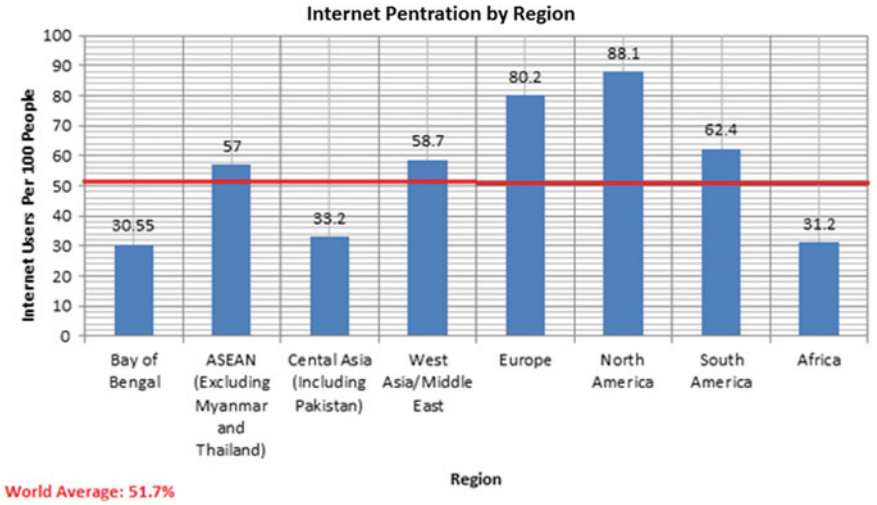

Fig. 5 Sub-regional comparison of Internet penetration by region. *Source* Miniwatts Marketing Group (2017)

Considering India's larger population, Indian Internet users make up 68% of the region's online population. This is followed by Bangladesh, Sri Lanka and Thailand which together make up roughly 30%, followed by the countries of Myanmar, Bhutan and Nepal accounting for between 0.05 and 2% each (Miniwatts Marketing Group 2017).

The average rate of Internet penetration in the BoB region is 30.55%, which is the lowest in the world, slightly behind Central Asia and Africa and significantly behind than the global average of 51.7% (Fig. 5).

Further breaking down the BoB region, we can see that Bhutan and Thailand enjoy relatively higher levels of Internet penetration within their populations with close to 40–50% of their populations using the Internet (Fig. 6). On the other end of the spectrum, Nepal and Bangladesh are amongst the lowest in terms of the percentage of Internet users in their populations with less than 20%. India and Sri Lanka are the closest to the average at around 30% of their populations using the Internet. Myanmar's Internet penetration rate is at 25%.

However, out of all the countries, Myanmar has recorded the most impressive levels of growth from less than 1 in a 100 people using the Internet in 2010 to 25 people in the span of 6 years, rising above Nepal and Bangladesh (Fig. 7). Bhutan has also more than doubled its Internet penetration rate from less than 15 in 2010 to above 40 in 2016. All other BoB countries have recorded some growth each year but none as impressive as Bhutan and Myanmar.

Although it can be agreed that there has been significant and consistent growth in the percentage of individuals accessing the Internet in the BoB region, it is important to further break down this information to find out how they access the Internet.

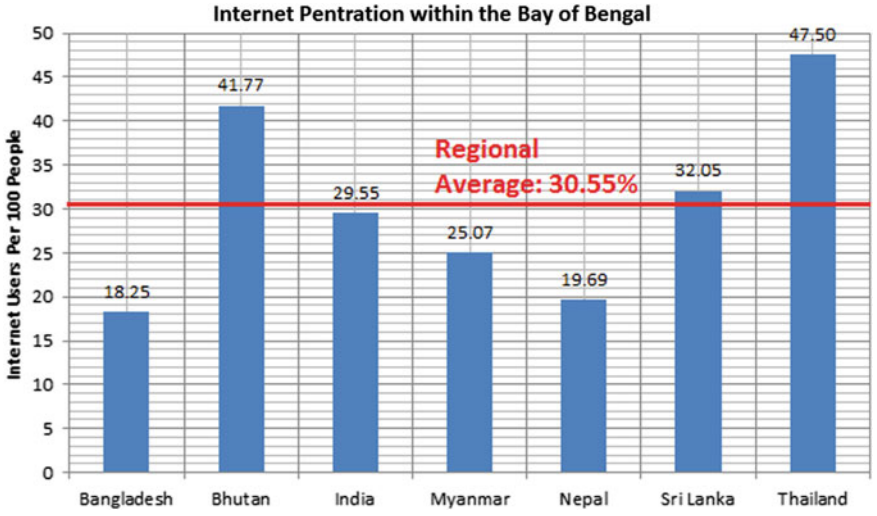

Fig. 6 Internet penetration within the Bay of Bengal countries. *Source* International Telecommunication Union (2017)

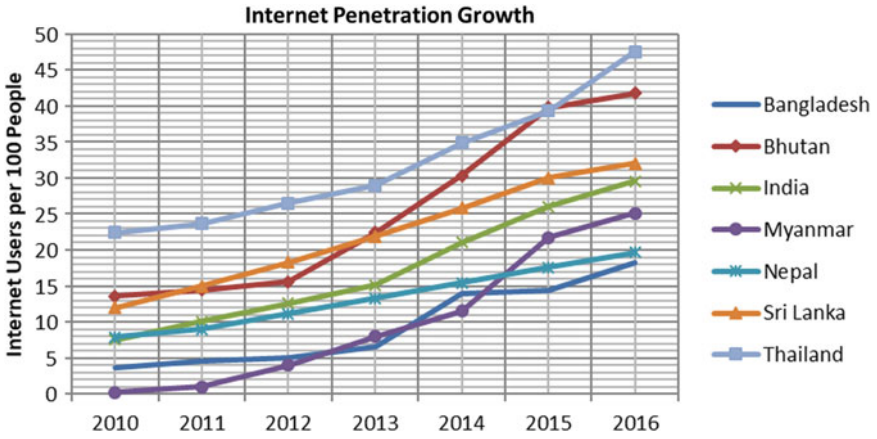

Fig. 7 Internet penetration growth. *Source* International Telecommunication Union (2017)

According to this data, on average less than 3.4 in 100 people have fixed broadband connections in the Bob region (Fig. 8). Most of these people are in Thailand and the average when not accounting for Thailand drops to 2.35 users per 100 people. The growth rate of fixed broadband users has also been marginal. Therefore, we can confidently say that most existing users as well as new users of the Internet in the BoB region do not access the Internet through fixed broadband subscriptions.

The people of the BoB region do have a rather high level of mobile-cellular subscriptions with the average of the region at around 106 subscriptions for every

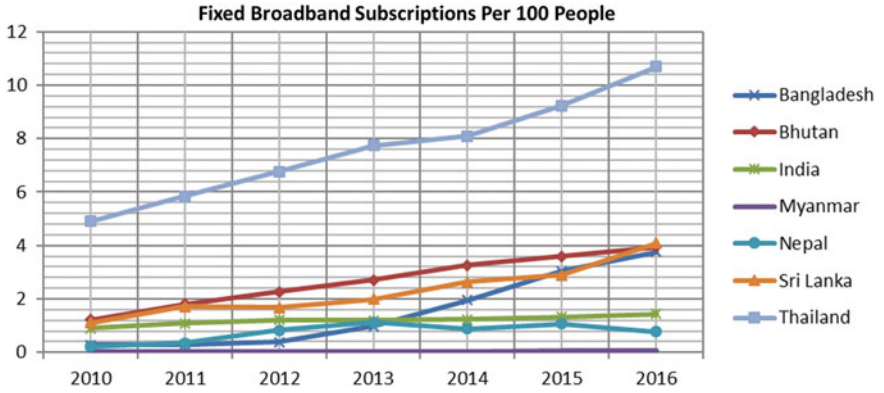

Fig. 8 Fixed broadband subscriptions per 100 people. *Source* International Telecommunication Union (2017)

100 people (Fig. 9). Even Bangladesh which has the lowest rate in the region has a population where 79 out of 100 people have mobile subscriptions. Although we do not know how many of these people have Internet-capable smartphones or Internet-enabled sim cards, the significantly low fixed broadband statistics along with the overall levels of Internet penetration, we can say that the majority of this region's Internet accessing population accesses the Internet through their mobile phones.

This representation of the data in Fig. 10 shows us that the level of economic development of a country does factor into the Internet penetration levels in the population. However, it is clearly not the only factor. In relation to the regional averages, the

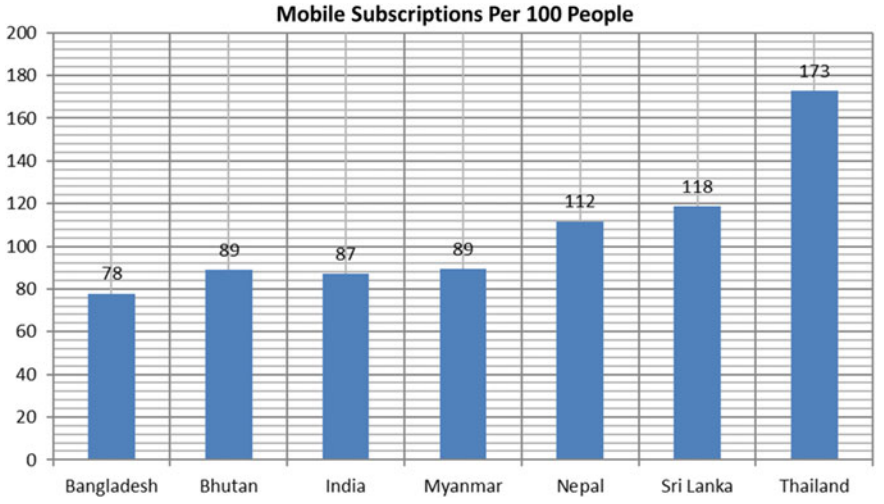

Fig. 9 Mobile-cellular telephone subscriptions per 100 People in 2016. *Source* International Telecommunication Union (2017)

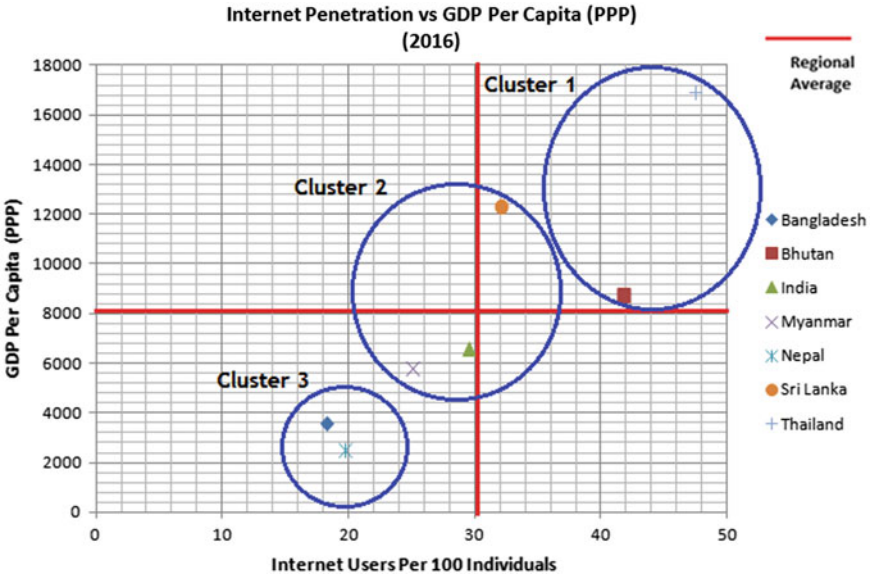

Fig. 10 Internet penetration versus GDP per capita (PPP) for 2016. *Source* International Telecommunication Union (2017), World Bank (2017)

seven countries can be divided into three clusters. Cluster 1 is made up of Thailand and Bhutan; countries which have at least 40% of their populations online and are significantly ahead of the region. It is interesting to note that despite Bhutan having nearly half the GDP per capita (PPP) of Thailand, the Internet penetration levels are only 6% less than Thailand and even performs better than Sri Lanka as well. Cluster 2 is made up of India, Myanmar and Sri Lanka which are all close to the regional average and have a significant minority (more than 25%) of their populations online. Although Sri Lanka has a significantly higher GDP per capita (PPP), we can see that it does not fare much better than India or Myanmar clearly proving that the level of economic development is not the only factor determining Internet penetration levels. Cluster 3 which is made up of Bangladesh and Nepal are countries with low access to the Internet (less than 25%). Bhutan is the clear outlier on this graph, performing exceptionally well for its level of development.

5 Internet Infrastructure in the Bay of Bengal Region

5.1 Submarine Cables

As of early 2017, there are approximately 428 submarine cables in service around the world spanning over 1.1 million km (Mauldin 2017). A submarine communication

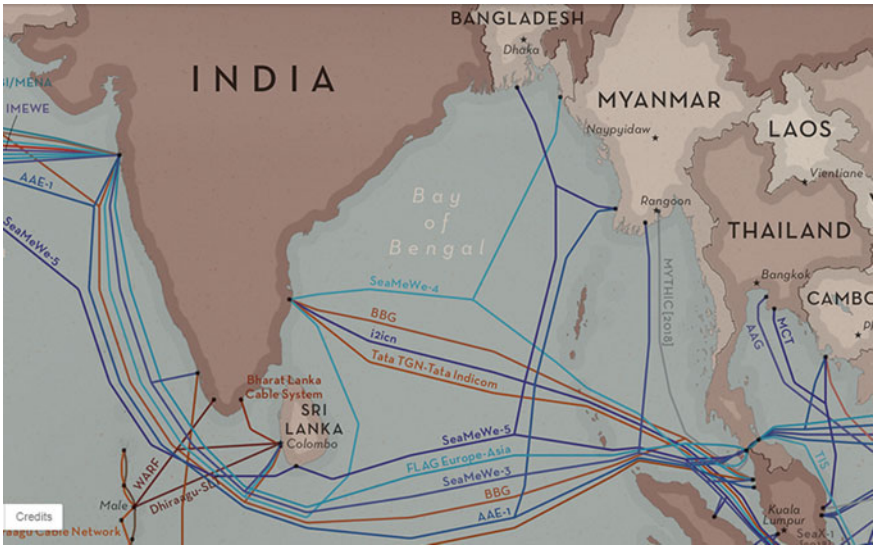

Fig. 11 Bay of Bengal submarine cable map. *Source* TeleGeography (2017)

cable is a cable laid on the sea bed between land-based stations to carry telecommunication signals across stretches of ocean. Figure 11 shows the Bay of Bengal submarine cable map.

Cables were traditionally owned by telecom carriers who would form a consortium of all parties interested in using the cable. In the late 1990s, an influx of entrepreneurial companies built lots of private cables and sold off the capacity to users. Both the consortium and private cable models still exist today. Content providers such as Google, Facebook, Microsoft and Amazon are major investors in new cables. The amount of capacity deployed by private network operators—like these content providers—has outpaced Internet backbone operators in recent years (Mauldin 2017).

As of 2017, there are six cables connecting at least two or more coastal BoB countries and one more due for completion in 2018 (Table 1).

As we can see from Table 1, most cables land on India's Western Coast at Mumbai. In the Bay, Myanmar connected to most of its cables in 2016, which explains the huge upsurge in recent Internet capacity in the country. For a small island nation, Sri Lanka has utilised the multiple cables connected to it and worked to provide invest in other supporting digital infrastructure which may partially explain why it possesses a higher than average Internet penetration rate. On the other end of the spectrum, Bangladesh is connected to the fewest cables in the region which would explain why the country has only 200 GBPS of bandwidth while usage regularly hits 400 GBPS (Husain 2017). It is interesting to note that Thailand has an overland submarine cable on its border with Malaysia near the Isthmus of Kra. Being landlocked countries, Nepal and Bhutan are not connected to any submarine cables.

Table 1 Bay of Bengal linking submarine cable list

Year laid	Name	India	Myanmar	Sri Lanka	Bangladesh	Thailand
1999	South East Asia–Middle East–Western Europe 3	Yes	Yes	Yes	No	Yes
2005	South East Asia–Middle East–Western Europe 4	Yes	No	Yes	Yes	Yes
2006	Bharat Lanka Cable System	Yes	No	Yes	No	No
2016	Bay of Bengal Gateway	Yes	No	Yes	No	No
2016	South East Asia–Middle East–Western Europe 5	To be included	Yes	Yes	Yes	No
2017	Asia Africa Europe 1	Yes	Yes	No	No	Yes
2018	Myanmar–Thailand Interconnect Cable	No	Yes	No	No	Yes

5.2 Internet Exchange Points (IXPs)

Internet exchange points are physical locations where different networks connect to exchange Internet traffic via common switching infrastructures. They are a key part of the Internet ecosystem and represent a vital way to increase the affordability and quality of connectivity in local communities (Internet Society 2015). Figure 12 shows the Bay of Bengal internet Exchange Point (IXP) map.

The impact of an IXP is dynamic and can be instrumental in developing the local Internet ecosystem. IXPs can attract a range of local and international operators, which then can trigger innovation and more business opportunities. In addition, IXPs can improve local users' quality of access by providing more direct network connections for local content producers and consumers. Experience shows that access speeds for local content can improve as much as tenfold with an IXP in place because traffic is routed more directly. IXPs can also improve the level of stability and continuity of access—their switching capabilities provide additional flexibility in redirecting Internet traffic when there are connectivity problems on the network. For example, if there is a breakdown in international connectivity, an IXP can keep local traffic flowing within the country (Internet Society 2015).

The country with the highest number of IXPs is clearly India, and however, if we refocus this to the BoB sub-region, we see that India has only one IXP, in Kolkata.

Fig. 12 Bay of Bengal internet exchange point (IXP) map. *Source* Internet Society (2017)

Similarly, Bangladesh, Nepal and Thailand all have just one IXP while Bhutan, Myanmar and the Northeast states of India have none.

6 The Benefits of E-Governance on a Sub-regional Level

Utilising digital interfaces would provide for a powerful tool to connect the region. While the importance of infrastructure and access to broadband networks is clear, the issue for developing economies is less about the absolute numbers of Internet users, and much more about how the Internet is being used to create a supporting ecosystem that becomes the bedrock of a pervasive and enabling digital economy. Hence, the focus of any initiative on the matter should primarily be on the delivery of stable and trustable services catering to local needs but on a sub-regional level (Telecommunications Research Project Corporate 2015).

This is the need of the hour for countries in the 'emerging' to 'transition' stages of digitisation. Emerging digital societies mainly see digitisation as a tool for accelerating socio-economic development, particularly in relation to improving social inclusion. Transition digital societies focus on the personalisation of services to achieve higher levels of engagement between individuals and institutions. Advanced

digital societies focus on developing interconnected and interoperable processes and services between sectors for productivity and efficiency gains (Okeleke et al. 2016).

E-commerce can be an important catalyst to normalising the idea of using the Internet for local businesses. This can be initiated in small steps such as ensuring delivery fulfilment and payment systems. The focus should begin with business-to-business (B2B) rather than business-to-consumer (B2C) services while bringing offline merchants online. This is whereas B2C drives usage numbers, B2B is where the larger productivity gains can be seen, allowing companies to cut transactions costs and gain access to a wider range of competing suppliers of raw materials and components, or capital goods (Telecommunications Research Project Corporate 2015).

Any company, be it an engineering firm or a restaurant, a farm or a small school, can easily adopt digital technologies, such as computer-aided design, social media for marketing, mobile-based information dissemination or a digital sales and cash register. This is happening with increasing breadth and speed. What the spread of the Internet does is to create a demand for the supply of components, app development and content creation, and business-input delivery systems on the one side, and for marketing and distribution channels to serve end-user markets on the other, in other words, entire ecosystems along multiple supply chains (Telecommunications Research Project Corporate 2015).

What role can the governments play? Create the facilitative business and regulatory environments to ease and encourage the benefits of increasing digitisation on a transnational level. The ideal regulatory environment would emphasise on three features: clarity, transparency and consistency. Sometimes uncertain regulation is much worse than prohibitive regulation. In India, for example, although both central and regional governments are increasingly demonstrating an impressive record of encouraging Internet start-ups through incubators, funding and tax relief, the paperwork required to obtain licences, certificates and permissions is often mountainous. This poses challenges to start-ups and favours those with foreign partnerships or good access to capital (Telecommunications Research Project Corporate 2015).

National security issues often impede the diffusion of digital technologies, however as restrictions are relaxed and there is progress towards a ‘democratisation’ of the digital economy, it allows more new entrants to exploit new technologies.

7 A Bay of Bengal Digital Ecosystem

At a BIMSTEC panel discussion on 28 May 2017 at Chulalongkorn University, Harvard historian and author of ‘Crossing the Bay of Bengal’ said emphasised the importance of making the region’s people feel part of a larger community (Hassin 2017). The primary aim of enhanced sub-regional digital connectivity should be constructing that bridge aiding current efforts to integrate the region.

The region suffers from a double-edged issue by which people constantly complain about a lack of available services and at the same time a shortfall of volumes

to justify many existing, new and planned services. Therefore, logically a combination of provision of effective services in the region in addition to a heavy-handed approach to publicising these to the people of the region is the key. This is where the role of a strong locally based and supported digital ecosystem can play a role.

Investing in international bandwidth is a high fixed cost resource. When there is little user demand, the access costs remain very high, but access is easy to expand once the infrastructure and bandwidth capacity exist. Thus, the focus needs to be on both stimulating demand and enabling supply—one without the other results in the negative investment cycle (Lovelock 2015).

Firstly, creating this Bay of Bengal digital ecosystem would be the provision of stable and affordable access to the Internet in the region. This involves a massive investment into infrastructure with the possible deployment of an intra-BoB submarine cable, especially connected to India since a large volume of the region's Internet content is imported from India. The construction of strategically located IXPs in the sub-region, perhaps in Siliguri and the Northeast states of India as well as in Myanmar would also be crucial to reduce the cost of local Internet provision as well as encouraging digital-based companies to deliver digital services in the region. Finally, considering the high level of mobile phone usage as compared to fixed broadband connections amongst the population in the region, it would be imperative to also include the construction of base transceiver stations. Sustainable broadband mobile connectivity cannot emerge, without a corresponding investment in certain aspects of fixed infrastructure. This highlights that policymakers need to focus on enabling widespread and inclusive mobile connectivity in combination with substantial fixed infrastructure to support the necessary capacity and backhaul requirements (Lovelock 2015).

Second, Internet content comes from three sources: local content produced by domestic websites, locally cached international content and international Internet content accessed directly. Locating content locally or in the region tends to speed up access speeds, as well as lowers international Internet transit costs. International sites such as Google, Facebook and YouTube are typically amongst the most popular websites, suggesting that a substantial portion of Internet traffic continues to come from international sources. If Internet costs remain high and quality is low, existing demand will continue to remain unrealised and, correspondingly, costs will not come down until international bandwidth capacity is, at least, adequate (Lovelock 2015). Hence, the promotion of content catering to local needs is a must. This can be encouraged by supportive policies towards content creating start-ups and companies in the form of tax incentives or exemptions.

Under the BIMSTEC sector of technology, information technology products and services is chaired by India. One of the most helpful steps undertaken by the Indian government that assisted the development of its IT sector was the creation of IT parks and incubation centres. The creation and provision of support to localised initiatives would provide a huge boost to the digital landscape of the region.

Keeping in mind the high rates of mobile ownership, the initiative can also promote or undertake the creation of mobile applications notifying users of announcements or disseminating information on government services in the sub-region. These could be

in the form of an application exchanging volume and price information on agricultural products in local cross-border areas catering to small traders or perhaps a schedule of available transport services. A language translation application would be another crucial form of service that could help connect the region.

Creating this digital ecosystem in the BoB region would also involve tackling issues of cybersecurity. Cross-border data flows would be one of the first issues with policy on where data can be transmitted and stored. The costs of halting the movement and storage of data outside the region would need to be measured against the security benefits of such a policy. At the same time, a regional policy on intellectual property would be necessary to encourage greater collaboration between the ICT firms in the region without the fear or intellectual property theft. ICT parks with facilities such as uninterrupted electricity, satellite uplinks, high broadband width and training facilities would also be crucial to encouraging the ICT industries of the region.

There are already two major programmes supported by multilateral agencies working in this area. The first is the South Asia Subregional Economic Cooperation Information Highway (SASEC IH) by the Asian Development Bank (2007) of which the Bangladesh section is currently active having recently received a loan of $3.9 million in 2014. The other is the Asia-Pacific Information Superhighway (APIS) by the United Nations ESCAP (UNESCAP 2016).

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Chapter 16
Harnessing the Potential of the Fourth Industrial Revolution in South Asia

Ratnakar Adhikari

1 Introduction

The South Asia region, which is home to a quarter of the global humanity, contributes a meagre 4% to the global gross domestic product (GDP). Many countries in the region could not fully exploit the potential of the previous three industrial revolutions, powered, respectively, by steam engines, electricity and information technology; but now, they stand at the cusp of the Fourth Industrial Revolution (4IR). According to Schwab (2016) from the World Economic Forum (WEF), the 4IR, driven by digital technology, is a qualitatively distinct phase in the industrial history, characterized by a fusion of technologies that is blurring the lines between the physical, digital and biological spheres.

What is even more pronounced is the speed at which recent technologies are being adopted. The spindle (the hallmark of the First Industrial Revolution) took almost 120 years to spread outside of Europe. By contrast, it did not take even a decade for the Internet to permeate across the globe (Schwab 2017). The Internet has undoubtedly helped various new technologies to move across frontiers at the speed of light.

These days, one hears of news of emerging technologies, such as artificial intelligence (AI), augmented reality (including virtual reality), additive manufacturing (including 3D printing), advanced robotics, blockchain, drones and the Internet of things (IoT) on a regular basis. While some of these will be explained later in Sect. 3

This Chapter draws extensively from the chapter by the author titled "The Least Developed Countries in the Era of the Fourth Industrial Revolution" to be published as a part of a conference volume of Sustainable Development Policy Institute, Islamabad (2020).

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of the chapter, one aspect that is common among these technologies is that they rely on digital technology as a backbone service.

There are two different views in relation to the impact of the 4IR in South Asia. The first view seems to suggest that the 4IR will likely aid re-shoring jobs to developed countries, while machines and robots will replace human beings, thus rendering them jobless. The second view seems to indicate that this phenomenon opens an enormous potential for the developing countries to catch up, reduce poverty and achieve their Sustainable Development Goals (SDGs). Unfortunately, both views are polarized based on superficial understanding. A more nuanced view, which falls somewhere between the above extremes, emerges when one dives deeper into the subject through technology-specific analysis informed by the realities on the ground.

This chapter is structured as follows: Sect. 2 provides a framework for the analysis of the key elements that facilitate or hinder the adoption of the 4IR by the South Asian countries. Section 3 presents a relatively nuanced, technology-specific analysis underpinned by evidence generated from various developing countries. Section 4 explores various opportunities available for South Asian countries in the area of 4IR. Section 5 concludes the discussion and provides some thoughts on the research agenda for South Asian countries.

2 Framework for Analysis

In the interest of simplicity, following Adhikari (2020), a three "As" framework is proposed to understand the implications of the 4IR in South Asia, although the same framework may be applicable in the case of other countries as well. The three "As" are: Accessibility, Affordability and Application, i.e. (a) accessibility to various technologies that are driving the 4IR; (b) affordability of enterprises and individuals to those technologies; and, finally, (c) precondition for their effective application.

2.1 Accessibility

Accessibility is a prerequisite for the use of various technologies due to two reasons. First, the South Asian countries face challenges to acquire relevant technologies because they are protected by patents, which are highly concentrated in a handful of countries. Patent concentration in the field of the 4IR both with regard to the commercial actors behind the patent applications as well as the countries of origin of the patents can be quite intriguing (Papadopoulou 2018). For example, a study by the European Patent Office shows that a total of 48,000 patents relating to the 4IR were filed up to the end of 2016 with the European Patent Office, of which more than 90% were filed by companies based in five territories (EPO 2017).

Similarly, an analysis of utility patents granted by the United States of America (USA) reveals that in 2017, US enterprises were the recipients of 46% of the

patents, whereas select European and Asian countries had a share of another 46%. Among the top patent applicants were Japan, Korea, Germany and China. The sectoral composition of granted patents and their growth shows that 4IR-related patents achieved high growth. For example, between 2013 and 2017, additive manufacturing and machine learning patents grew at a compounded annual growth rate (CAGR) of 35% and 34%, respectively. Similarly, CAGR for autonomous vehicles was 27%, and for aerial drones, it was 26% (Petch 2018).

The concentration is also visible from the fact that an overwhelming majority of tech start-ups, particularly in the field of AI, are being acquired by big tech giants, such as Google, Apple, Facebook, Amazon, Intel, Microsoft, Meltwater and Twitter. Between 2013 and 2017, more than 300 AI start-ups, of which 115 in 2017 alone, were acquired by major tech giants (CBI Insights 2018; see also UNCTAD 2019).

Companies from South Asian countries do not even feature in any of the lists of movers and shakers in the area of obtaining intellectual property (IP) protection on technologies that power the 4IR. However, this does not mean that the South Asian countries are completely excluded for enjoying the benefits of technologies. There are three ways in which these technologies can be acquired. First, they can be acquired through imports, which entail obtaining a licence from the IP holders by paying agreed royalties. Although royalties may be costly for many companies in South Asia, they need to conduct a thorough cost-benefit analysis before importing the relevant technology.

Second, the use of open-source technology can offer a potential avenue, as some 4IR technologies are available as open-source technologies, which can be freely used. Indeed, some platforms are even openly encouraging the free use of their technologies. For example, in the area of AI, the OpenCog Foundation's project called SingularityNET, dubbed the world's decentralized AI network, "let's anyone create, share and monetize AI services at scale" (The Global AI Network 2019).

Another option to acquire technology is to generate technology within the country, for which investment in research and development (R&D) is a precondition. However, South Asian countries are not major contributors to technology generation, which can be gleaned from their spending in R&D. For example, according to the latest World Development Indicator, the gross research and development expenditure as a percentage of global GDP was 2.23% as of 2016. However, out of eight countries in the region, data for only four countries are available, which too are dated. For example, India spent the highest in R&D, i.e. 0.62% (as of 2015), followed by Nepal at 0.3% (2010), Pakistan at 0.25% (2015), with Sri Lanka spending 0.11% (2015).

Similarly, a lack of necessary infrastructure to enable enterprises and individuals to use 4IR technologies could pose a barrier to access. The Internet is the backbone infrastructure for much of these technologies, and electricity is the backbone infrastructure for the Internet. Fortunately, access to electricity does not pose a significant problem for South Asian countries; the entire region's access to electricity being 89.9%, which is higher than the global average of 88.8%. Bangladesh and Pakistan are the only countries in the region which have a lower access to electricity than the regional and global average (Fig. 1).

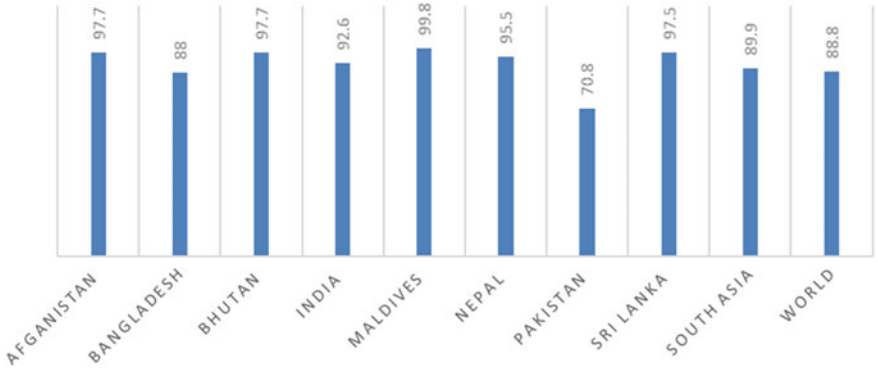

Fig. 1 Access to electricity (% of population) in South Asia, 2017. *Source* World Bank (2019a, b)

Such a level of access would not have been possible without regional cooperation among South Asian countries. For example, India has invested heavily in the hydro-electricity projects in Bhutan and is the major importer of electricity from Bhutan. Nepal has been importing electricity from India to reduce its power deficit. Regional cooperation on power sector can help reduce significant power-gap that exists in various countries in the region. For example, a study by Timilsina (2018), that examines the importance of enhancing cross-border transmission interconnections and regional electricity trade to promote hydropower in the South Asia region, shows that hydropower capacity would increase by 2.7 times over the next two decades if a regional electricity market is developed.

However, on access to the Internet, the South Asia region has a long way to go particularly for countries such as Afghanistan, Bangladesh and Pakistan. The regional average is 30%, which is lower than the global average of 49.7%. However, in the Maldives, access to the Internet, standing at 63%, is much higher than the global average and access in Bhutan is close to the global average (Fig. 2).[1]

According to UNESCAP (2019), there is a sharp disparity among the countries in terms of bandwidth availability, which is attributed to a weak terrestrial fibre-optic connectivity in the countries with the lowest availability rates. This results in low capacity, high cost and latency as well as limited reliability of services.

Clearly, more can and should be done in this area, for which regional cooperation can be an avenue. For example, improved connectivity to submarine cable via India for two landlocked countries in the region—Bhutan and Nepal—could significantly improve the cost as well as performance in these countries. In fact, a rather ambitious Master Plan for the Asia-Pacific Information Superhighway, 2019–2022, prepared by UNESCAP (2019) already provides a blueprint for actions to be undertaken in four pillars to enhance connectivity in the wider region. These are: physical infrastructure

[1] Use of World Development Indicator as a source is international because it facilitates valid comparison. At the time of writing, the International Telecommunication Union (ITU) had published estimated figures for 2018, which need to be verified when the actual data for 2018 are available by the end of 2019.

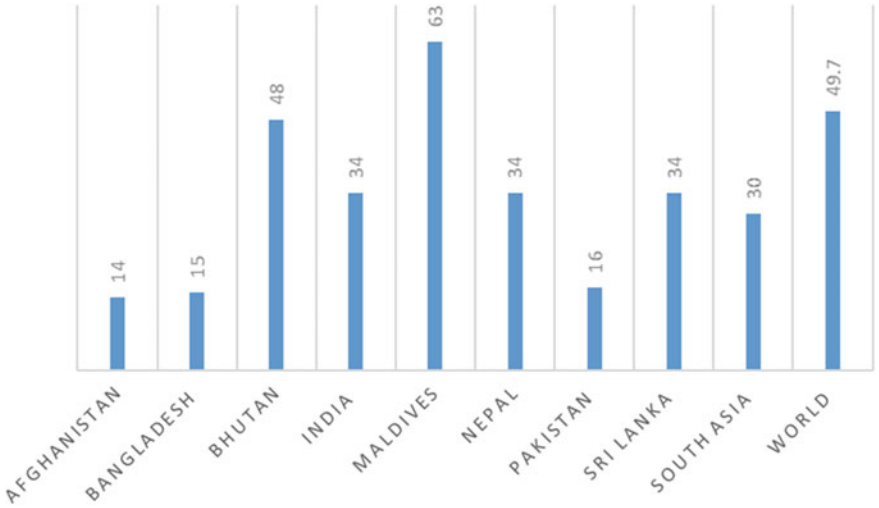

Fig. 2 Individuals using internet (%) of population, 2017. *Source* World Bank (2019a, b)

upgrade and interconnection; Internet traffic management; building regional network resilience; and promoting broadband access in underserved areas.

However, regional cooperation alone may not significantly improve connectivity in the region. More investment is required in the telecom sector, for which liberalization of licensing system and liberalization of investments (Mode 3 in GATS parlance) could be instrumental, as shown by the example of the Maldives (Adhikari and Shatskova 2018). Similarly, the liberalization of equipment for Internet browsing such as computers, tablets and smartphones could contribute to the enhanced Internet access (Ibid).

2.2 Affordability

Even if 4IR technologies are accessible, the prices for the use of these technologies or devices which allow users to make their productive use can be prohibitive. This could very well mean that individuals and enterprises in South Asian countries, unable to afford them, may still be excluded from the benefits offered by these technologies. As noted above, IP protection as well can render some technologies very expensive, as can a lack of competition in the market or various other policies of the government.

For example, if the market structure of telecom service providers including Internet service providers (ISPs) is restrictive due to licensing policy, affordability can be compromised. Similarly, if there is a cartel among the information and communications service providers, including ISPs, prices charged for accessing digital services can be very high. Although such a problem can be resolved through the effective

implementation of competition policy, South Asian countries are yet to fully harness its potential. Like in the case of access as described above, if the government charges high tariffs on computers, tablets or smartphones, their prices tend to be high, rendering them unaffordable for a large segment of the population.[2] This may go hand in hand with domestic policies aimed at producing such equipment at the country level, provided they are or can be made competitive.

Internet affordability remains one of the most significant obstacles to Internet access around the world, which, as indicated above, is the main backbone service to facilitate the adoption and use of 4IR technologies. According to the Alliance for Affordable Internet (2018), 2.3 billion people live in a country where a 1 GB mobile broadband plan is unaffordable for individuals earning an average income.[3] That said, South Asia is uniquely positioned to have the best average affordability of data (1 GB) at 1.2% of monthly income, which is better than many comparator regions.

According to the latest data, Internet affordability in select South Asian countries is better than comparator countries. Although Bhutan and the Maldives are not included in the analysis, based on the ITU data, affordability figures in these countries are reasonable. While Sri Lanka is one of the best countries in the region in terms of affordability, followed by India and Pakistan, it is less affordable in the LDCs in the region (Bangladesh, Afghanistan and Nepal). Looking at the recent trend, it is surprising to note that affordability in Bangladesh and Nepal has reduced in 2018 compared to 2017. Many countries in the region have more competitive pricing as compared to their comparator countries from Africa (Kenya), but not as competitive as comparator countries in Latin America (Brazil) and South-East Asia (Myanmar).

On the positive side, at least three countries in the region have better affordability compared to Asian average. Although LDCs in the region, particularly Bangladesh and Nepal, need to do more to reverse the trend by, among other things, injecting competition in the market with a view to reducing prices, affordability, as such, is not a major problem in the region. They could do well to learn from the success of countries such as India and Sri Lanka to make the Internet more affordable (Table 1).

Whatever Internet access is achieved in South Asian countries, it has been achieved through the mobile Internet—thanks to the rapid spread and adoption of 3G and 4G technologies. With the advent of 5G technology, which expects to offer connections that are much faster than current connections, with average download speeds of around 1 GBps expected to soon be the norm (Moore 2019), it would be much easier to propel several 4IR technologies at speed. This will enable services such as autonomous vehicle and long distant surgery to be more accessible. However, if the rate of adoption of 4G technology is any guide, it may take time for South Asian countries to adopt this technology and spread its benefit widely.

[2] See generally, ITU and UNESCO (2019).

[3] According to Access for Affordable Internet (2018), this figure was calculated by using 2017 population estimates from the World Bank of countries covered in their annual report and including 1.3 billion in China. They define unaffordable where the price of 1 GB of mobile broadband data exceeds 2% of average monthly income.

Table 1 Mobile broadband price/1 MB data in South Asian countries, comparator countries and Asia

Territory	Price (USD, 2018)	As % of average gross national income per capita			
		2015	2016	2017	2018
Afghanistan	1.98	N/A	N/A	N/A	4.17
Bangladesh	2.88	3.63	2.66	2.24	2.35
India	0.73	3.55	2.69	1.53	0.48
Nepal	4.85	9.14	4.60	4.41	7.37
Pakistan	1.30	2.07	1.22	1.12	0.99
Sri Lanka	0.77	0.48	0.43	0.40	0.24
Myanmar	0.66	5.90	N/A	1.47	0.66
Kenya	4.86	9.72	4.33	4.01	4.05
Brazil	5.25	1.97	1.40	1.70	0.73
Asia	N/A	3.5	2.5	1.5	1.5

Source Alliance for Affordable Internet (2019)

Moreover, given the concentration of patent protection of most of the 4IR technologies and the market concentration of a few firms in the technology sectors, these technologies are unlikely to be affordable for South Asian countries. However, competition, innovation and economies of scale in some of these technologies have contributed to making them more affordable. For example, the prices of 3D printing or 3D printing services have reduced considerably over the past few years, making them more affordable, not only for industrial use but also for households, with some of the 3D printers costing less than USD 300. Nowadays, most of the cheaper versions of 3D printers use polymers to print products. However, as metal additive technologies continue to improve and new techniques, materials and machines are created, metal additive solutions are likely to become more affordable and accessible (Conrado 2018). Even polymers can be replaced by recycled plastics (UN 2017), thereby not only making the use of this technology more affordable, but also contributing to environmental conservation.

2.3 Application

Once access and affordability are ensured, 4IR technologies need to be put into effective application for the benefit of firms or individuals. Application, which is largely a national level issue, is either facilitated or constrained, depending on the situation, predominantly by two critical factors, namely skills and policies/regulations.

The demand for skills has been rapidly evolving over the past four decades or so, although the pace of change has hastened in the recent past with increased premium attached to higher skills. At the most basic level, it is important for political, bureaucratic and private sector leaders to possess cognitive skills to understand the complexity brought about by digital disruption coupled with mental preparedness for being open to new ideas, technologies and their application both at the macro- and micro-levels.[4]

Since 4IR-related technologies are based on digital platforms, one would think that operating them requires competency in hard skills such as those within the Science, Technology, Engineering and Mathematics (STEM) discipline. Although this is true to some extent, taking advantage of the 4IR requires several soft skills as well (WEF 2018).

Based on the analysis from the networking website LinkedIn, in 2019, employers are looking for a combination of both hard and soft skills, with creativity topping the list of desired attributes (Charlton 2019). While hard skills most in demand included cloud computing, artificial intelligence, analytical reasoning, people management and user experience design; soft skills are creativity, persuasion, collaboration, adaptability and time management (Ibid).

What is more important—the skill sets that were in demand in 2015 are likely to change in 2020, both in type and priority order, with softer skills, which cannot be replaced by machines, such as complex problem solving; critical thinking; creativity; people management; coordinating with others and emotional intelligence being the most prominent ones (Gray 2016). This is consistent with the International Trade Centre (ITC) (2018), which suggests that more than a third of skills requirements might change in a handful of years.

This means that it would be critical to develop "future-proof" skills, which is easier said than done, not least because South Asian countries are confronted with two major challenges. First, most countries in South Asia, which do not even have resources to provide basic education, will find it difficult to meet the growing demands for resources and will only be able to meet this requirement through external assistance or by engaging the private sector. Second, in a skills market where flexibility and adaptability are key to develop skills fit for the future, rigid and inflexible education systems in many South Asian countries can only be tackled through strong political determination.

According to the WTO, in order to fill both skills gap and make a rapid change in skills sets required to meet the growing demand of the 4IR, many governments are undertaking substantial investment in human capital through training and skills development (WTO 2018a). Various governments, on their own or in partnership with the

[4]Bawany (2018), for example, identifies the following as elements of cognitive readiness competencies most leaders should possess to navigate through 4IR: (a) mental cognition: recognizing and regulating one's thoughts and emotions; (b) attentional control: managing and focusing one's attention; (c) sensemaking: connecting the dots and seeing the bigger picture; (d) intuition: checking one's gut, not letting it rule the mind; (e) problem-solving: using analytical and creative methods to resolve a challenge; (f) adaptability: being willing and able to change, with shifting conditions; and (g) communication: inspiring others to act and creating fluid communication pathways.

private sector or other organizations, are offering adult learning programmes focusing on digital skills development and complex cognitive skills, such as information processing and problem solving (Ibid).

A few noteworthy initiatives by various organizations in the region in this area are worth highlighting here. In Nepal, an AI scholarship scheme with the target of training 10,000 students as part of global AI training programme to address talent shortage was launched by Fusemachines, which has offices in Nepal and other three countries. The initiative aims to provide highly competitive students access to the proprietary AI learning platform and content, proprietary AI coding platform, a community of AI experts and mentors and on-site weekly training in local classrooms (Fusemachines 2018).

Similarly, in India, under the government's initiative of Atal Tinkering Labs (ATL), knowledge about 3D printing is being imparted at the school level to boost innovation. One of the beneficiaries of the scheme, 3Dexter, a Delhi-based company, provides experiential learning on 3D printing at schools and has benefited from ATL scheme. The company, which sells printers and sets up 3D designing labs at schools, also offers training and education around 3D printing at schools right from third grade onwards (Soni 2018). At the same time, in order to address skill mismatch between the existing talent and AI-ready talent, Intel India has trained more than 150,000 developers, students and professors since 2017 (Pramanik 2019). Likewise, in Bangladesh, Planeter—a Chittagong-based company—has successfully trained more than 6000 students on microcontroller and robotics since its inception.[5]

The second important issue from the perspective of facilitating application is the policies and regulations, which can be either "enabling" or "mitigating". While some of the policies are cross-cutting in nature in that they can also help countries to enhance accessibility as well as affordability, most of the policies that are needed in this area are designed to facilitate enhanced and effective application.

Enabling policies/regulations are quite varied, and their development is possible only through a coordinated action from various ministries, such as the Ministry of Information and Communication, the Ministry of Science and Technology, the Ministry of Education, the Ministry of Industry, the Ministry of Trade and the Ministry of Youth, to name but a few. While technology policy should be the major enabling policy, such a policy interacts with information and communications policy, fiscal policy, trade policy, investment policy, public-private policy and gender and youth policies in the interest of promoting inclusion in the application of these technologies.

These policies can enhance the accessibility and affordability elements described above. Examples include an information and communications policy that imposes universal service obligations on providers, thereby connecting even the "last-mile" users to the Internet; a fiscal policy that incentivizes firms to invest in R&D on 4IR technologies to enhance their productivity; and a trade policy that liberalizes ICT services or reduces tariffs on the imports of ICT materials. Additionally, investment policy that removes the cap on foreign ownership of industrial enterprises dealing

[5] See: http://planeterbd.com/about-planeter/ (accessed 3 October 2019).

with 4IR-related technologies or backbone services can play a positive role in broadening access. Finally, a public-private policy that allows government agencies and state-owned enterprises to work together to enhance digital connectivity overall are also worth citing here.

Another set of policies and regulations is for mitigating the negative consequences of these technologies; although when we talk of policies, such as a competition policy, the line between enabling and mitigating policies becomes blurry. Among the negative consequences, whether real or perceived, concerns have been voiced about negative consequences of digital technologies in areas such as competition, consumer protection, data protection, safety and security.

Policies need to be designed and/or updated in these areas to build trust and confidence among the users. As briefly highlighted above, increasing concentration in 4IR technology and consequently increased market power of selected companies does not bode well for the future of competition and consumer protection (Economist 2018a). Similarly, the acquisition and use of personal data of 87 million Facebook users by Cambridge Analytica to serve its political motive has resulted in a call for serious rethinking on the handling of online personal data (Economist 2018b). Recall the havoc created by drones flying in the aerial zones of otherwise highly equipped major airports in London during the peak festive travel period in December 2018 resulting in the cancellation of several flights, which has brought the issues of safety and security of drones into sharper focus (Pérez-Peña et al. 2019).

While imperatives for policies/regulations to evolve in tandem with technological evolution cannot be overemphasized, it is easier said than done, not least because there is bound to be a time lag between the two. Whereas the European Union (EU)'s General Data Protection Regulation (GDPR)[6] is considered the most important milestone in data privacy regulation to keep pace with recent technological development that relies on the use of personal data, many jurisdictions are yet to design anything closer to that.

3 Towards a More Nuanced Approach

At a very basic level, one needs to be aware of the benefits of the 4IR or parts/segments thereof, being fully mindful of the challenges it poses. It needs to be emphasized here that the boundaries between some of these technologies are blurring with various uses of 4IR technologies operating in combination with each other. Examples include using a combination of drones, IoT and AI for increasing the efficiency and

[6]The GDPR, which came into force on 25 May 2018 to protect data and privacy of data subjects residing in the EU, not only applies to organisations located within the EU but also to those located outside of the EU if they offer goods or services to, or monitor the behaviour of, the EU data subjects. It applies to all companies processing and holding the personal data of natural or legal citizens residing in the EU, regardless of the company's location. For further details, see: https://eugdpr.org/.

the effectiveness of farming system. Based on the extant literature and information available in the public domain, we provide below the description of select 4IR technologies and various facets relating to their opportunities and challenges.

3.1 Artificial Intelligence

AI has become a regular feature of our lives, although we may not notice it. AI is used for smartphones (e.g. Siri in iPhones); smart home devices (e.g. Alexa from Amazon); social media (e.g. suggestions of various services offered on Facebook); public videos (playlist created by YouTube based on past viewing activities); search engines (e.g. Google); and online advertisement (e.g. ads that appear on screen based on the user's browsing history). When AI is combined with robotics—a human-like machine programmed to perform select human tasks—an AI robot can be created. One such example is Sophia—a humanoid robot created by Hong Kong-based Hanson Robotics in 2016—who has been granted citizenship by Saudi Arabia.

One of the major concerns that have been raised about AI is that it would lead to substantial job losses. This view is true to some extent, because many jobs—particularly routine and repetitive ones, such as those of drivers, translators, ticketing agents, banking clerks, workers in the assembly line, telemarketers and customer service assistants—that are currently being done by human beings can be performed by AI (Harari 2018).[7]

However, it is equally important to understand that new jobs will be created in sectors that require creativity and ingenuity; empathy and compassion; critical thinking and analysis; and complex social interaction, which cannot be easily done by AI. New jobs are also likely to be created in sectors that do not currently exist, such as development and maintenance of 4IR technologies; data protection and cybersecurity; and data capture and scrubbing, to name but a few. Moreover, the growth in jobs in the ancillary sectors, particularly in the services sectors—financial, transportation, communications, logistics, leisure and entertainment, and above all, care for the elderly—because of the overall growth of economies as well as economic opportunities, cannot be underestimated.

A recent empirical investigation by Vermeulen et al. (2018) lends credence to this view. The study finds support for a "rebound" scenario, where the job loss in the sectors where technology is likely to be applied is limited, while the potential for job creation in other sectors is substantial. The new jobs to be created are likely to be either new sectors or spill-over sectors (Ibid). This finding is consistent with the WEF's prediction that 75 million jobs will cease to exist by 2022, but another 133 million will be created, with a net increase of 58 million new job opportunities (Cann

[7] AI can perform some jobs better than human beings, not only because each AI relies on big data relating to past patterns, which can be processed in split seconds, but also because AI possesses non-human (or even "beyond-human") qualities, namely connectivity and updatability.

2018). This is consistent with Gartner (2017), which predicts that AI will create 2.3 million jobs in 2020, while eliminating 1.8 million.

AI entails the simulation of a human brain function, such as logical reasoning, learning and self-correction, by machines. This is achieved through machine learning and/or deep learning, for which large amounts of data are required. Machine learning entails training algorithms, whose performances improve by feeding them large amounts of data over a relatively long period of time. Deep learning is a subset of machine learning, in which artificial neural networks are trained to simulate human intelligence, for which vast amounts of computing power and data are required.

Since the bulk of data is generated from documents, images, audios and videos, human resources are required at scale to input, quality control and process them. Like any other industry, the AI industry works like a value chain, where the lower end of the value chain, such as data inputs, scrubbing and processing, is done in countries with lower wages. This provides employment opportunities to mostly young, relatively well-trained people in developing countries.

One such example is a company called Cloud Factory, with its offices in the UK and the USA, as well as in countries such as Kenya and Nepal, where most of the data input, quality control and processing for AI is done. In the Nepal office alone, the company provides employment opportunities to around 2800 young (18–30 years old) people, many of whom work on a part-time basis, while pursuing their regular formal studies.

One of the most promising uses of AI in South Asia is in the area of agriculture—the source of livelihood for more than two-thirds of the population. AI use in agriculture has been successfully tested in South Asian countries such as India. For example, a partnership between Microsoft and International Crop Research Institute for the Semi-Arid Tropics, an NGO to develop an AI sowing app, sends SMS advisories to farmers on the optimal date to sow their crops. The date so selected is based on weather conditions, soil and other indicators generated by analysing 30 years of historic climate data. As a result of the use of this app, farmers in Andhra Pradesh, Southern India, have achieved 30% higher yields (Microsoft 2018).

Similarly, AI application in the field of health is no more a theoretical construct. In December 2018, a cardiologist in Ahmedabad, India, performed the world's first in-human telerobotic coronary intervention on a patient nearly 32 km away (Bajpai and Irshad 2019). Other examples from India include Aravind Eye Hospital working with Google to use AI for diabetic retinopathy screening and Manipal Hospitals using International Business Machine (IBM) Watson for Oncology, a cognitive-computing platform, to help physicians identify personalized cancer care options across the country (Balakrishna 2019).

3.2 Drones

Drones are pilotless aerial vehicles, which are used to be common in the defence and photography areas. They are now emerging as a relatively cheap mode of transportation that can help in the delivery of critical supplies to inaccessible areas in a timely manner. For example, in Rwanda, the government has partnered with Zipline—a California-based start-up, United Parcel Service (UPS) and the Global Vaccine Alliance (Gavi) to deliver blood to hospitals in the remote parts of the country.

Remote clinics can now place orders for lifesaving blood via text messages, which are fulfilled by drones dispatched from different centres dotted around the country. Since October 2016, when the service was launched, Zipline drones have covered over 300,000 miles on more than 10,000 flights and delivered thousands of units of blood (Jackson and Hance 2019). Zipline has now entered the second LDC in the region—Tanzania—and has received USD 40 million funding from venture capital firms to continue the same business at scale (Ibid).

There are reasons to believe that drones can be used for logistics purposes, particularly for the "last-mile" delivery of cargos. Not surprisingly, e-commerce operators are already mulling over the possibility. However, more than technology itself and mechanics of delivery in this bourgeoning sector, it is the problem of regulation that is impeding the prospect (Deloitte 2018). This, according to Deloitte (2018), can be resolved through a strong tripartite collaboration between governments, the industry and knowledge institutions.

Here too, an LDC like Rwanda has shown the way to some technology savvy developed countries on drone regulation by pioneering performance-based regulation, which allows airspace access to any pilotless aircraft on a mission-specific basis. According to this intentionally agile regulation, the government specifies the safety standard of the mission, and the drone operators specify how they are going to meet it. Such an arrangement enables the government to keep up with the rapid development of the technology (Russo and Wolf 2019).

3.3 Additive Manufacturing

Additive manufacturing is defined as a process of combining materials to make objects from 3D model data for manufacturing products, of which a more commonly used term—3D printing—is a variant. This technology enables a rapid and cost-efficient creation of bespoke products.

This technology can offer a potential for many companies from developed countries to re-shore jobs from developing countries and the LDCs. Jobs that are particularly vulnerable are the ones performed in factories ranging from garments, shoes, plastic and kitchen gadgets, ball bearing to even aircraft parts that require absolute precision. However, there is no evidence so far to suggest that job re-shoring has taken place at a scale to warrant serious concern.

One has to be equally mindful that the potentials of additive manufacturing, particularly 3D printing, are enormous mainly in infrastructure, disaster relief and the health sector. For example, in the infrastructure sector, the inauguration of the first-ever 3D-printed cyclist bridge in the South-eastern town of Gemert in the Netherlands in October 2017 (Guardian 2019) has opened endless possibilities for scaling up this service that can transform the rural, disconnected and last-mile areas in the countries with difficult geographic terrain such as Afghanistan, Bhutan and Nepal.

However, 3D printing capacity remains highly concentrated. In fact, the five leading countries (the USA, followed by China, Japan, Germany and the UK) account for an estimated 70% of the total (UNCTAD 2019). This does not, however, mean that other countries are completely excluded from utilizing its potential. For example, 3D printers are being used to create prosthetics in countries such as Cambodia, South Sudan, Tanzania and Uganda (Ibid). In South Asia, India's largest bicycle and scooter maker has been using 3D printing since 2014, allowing products to reach markets at faster rates (Ibid).

Similarly, Tvasta—a start-up that focuses on industrial 3D printing—has recently released a prototype of a 3D-printed house. The company intends to support the "housing for all" scheme of the Government of India by constructing 3D-printed houses using concrete and/or other natural materials. The team plans to have the capability to print the elements of a complete house of about 320 square feet in about 3 days and complete the entire assembly, including finishing, within a week (The Economic Times 2018).

With the 3D printing market expected to touch USD 32.78 billion by 2023, this offers a great opportunity for South Asian countries not only to fabricate but also to export 3D printing devices. This is already happening in India where Ethereal Machines, the winner of "Best of Innovation" award at Consumer Electronics Show 2018, Las Vegas, is manufacturing 3D printing (Soni 2018). Bangladesh has gone a step further with Planeter—a Chittagong-based company which is manufacturing commercial robots including a 3D concrete printing robot. For example in 2018, the company exported 11 robots to South Korea (Palak 2019).

3.4 Blockchain

Blockchain is a decentralized, distributed record or "ledger" of transactions, in which the transactions are stored in a permanent and tamper-proof manner using cryptographic techniques, thereby enhancing trust between parties involved in business transactions (WTO, 2018b). It removes the need for multiple copies of documents, reducing paperwork and the administrative costs associated with processing and verifying products and services, thereby reducing time and transaction costs for businesses. This technology is also contributing to better tracking and tracing products (ITC 2018).

One of the most promising examples of the use of blockchain technology is the partnership between Maersk and IBM, in operation since 2016, to manage and

Table 2 Trading across border sub-indicators in South Asia, 2019

Territory	Documentary compliance (export)		Documentary compliance (import)	
	Time (hours)	Cost (USD)	Time (hours)	Cost (USD)
Afghanistan	228	344	324	900
Bangladesh	147	225	114	370
Bhutan	9	50	8	50
India	14.5	77.7	29.7	100
Maldives	48	300	61.0	180
Nepal	43	110	48	80
Sri Lanka	48	58	48	283
Pakistan	55	118	143	250
South Asia	74.1	160.3	108	276.7
East Asia and the Pacific	57.6	109.4	57	109.5

Source Doing Business in South Asia, World Bank (2018a)

track the paper trail of tens of millions of shipping containers across the world. The blockchain platform, TradeLens, is expected to enhance transparency and improve information sharing among trading partners. Although the initiative, launched in early 2018, is facing teething problems, such as the slow pace of bringing carriers onto the platform (Allison 2018), it is likely to help logistics service providers save billions of dollars, if and when, operated at scale (ITC 2018).

In South Asia, this technology can be utilized effectively to facilitate relatively free, paperless trade, not least because meeting document compliance requirements in the region—barring a few exceptions—can be an excruciating experience. As Table 2 shows, one of the sub-indicators of trading across border indicator of the World Bank Doing Business Report is documentary compliance, where many countries in South Asian countries fare poorly—both for exports and imports in terms of time taken (hours) and cost incurred (USD). The regional average with the nearest possible comparator region—East Asia and the Pacific—shows that South Asia needs to do a lot of work to catch up and eventually compete with its comparator in the international market. Although countries such as Bhutan, India and Nepal fare relatively well, Afghanistan, Bangladesh and the Maldives need to reform their systems (Table 2). One avenue of which is to use blockchain to reduce the burden on international trade transaction which ultimately affects consumers.

Blockchain also helps in facilitating traceability, which has now become an important part of international supply chain safety (e.g. health and environmental standards) and ethical marketing (e.g. fair trade movement). Among various examples of its application, the one from Ethiopia stands out. In Ethiopia, the government recently signed a memorandum of understanding with Swiss-based Cardano Foundation to use blockchain technology to enhance trade of Ethiopia's biggest export item, coffee beans (Qamar 2018). By streamlining traceability and the supply chain through

blockchain technology to record, track and trace coffee beans from local farmers, this initiative is expected to provide consumer confidence about the source and purity of coffee beans. It is hoped that local farmers can receive an increased return on their labour as the consumers will be ready to pay a premium price for the end product (Ibid).

4 Mapping Opportunities in South Asia

Based on the above discussion, this section makes an attempt to map opportunities present for South Asian countries—regardless of their level of development. South Asia is one of the fastest growing regions in the world, and countries in the region have made significant progress in the recent past on the human capital front. Although their basic infrastructure in the area of physical connectivity (road, transport, ports, etc.) needs considerable improvement, their digital infrastructure—both in terms of availability and affordability—is better than many other countries and regions in the world, although some improvements are needed in this area as well. On the choices of policies and maintaining their stability, many of the countries in the region may need more work.

In the previous industrial revolutions, the comparative advantage of countries used to be shaped mainly by their resource endowments, with relatively lower-income countries stuck in production and exports of primary commodities and low-end manufacturing and higher-income countries focusing on high-tech goods and services. However, the 4IR makes it more possible for lower-income countries to leapfrog in certain areas. ICTs, for instance, have been shown to facilitate access to basic services and enable new business models. ICTs revolution coupled with rapid integration of lower-income countries in the globalization economy enable rapid transfer of ideas and technologies and lower the barriers to innovation, offering new ways to develop, according to The Global Competitiveness Report (WEF 2018), which focuses on 4IR readiness of 140 countries in the world.

The latest edition of the report shows that South Asia, as a region, is at a relatively low level of their preparedness for the 4IR (WEF 2019). The region is just above Sub-Saharan Africa, although on the indicators relating to market and innovation, the region fares better than Latin America and the Caribbean (Table 3).[8] However, there are wide variations in country indicators within the region, with India being the best performer in the region (at 64th position) and Pakistan being the worst (110th) out of 141 countries included in the report, with other three countries, included in the report falling somewhere in between: Sri Lanka (84th), Bangladesh (105th) and Nepal (108th).

[8] A major limitation of the report from the perspective of South Asia is that it does not include three countries—Afghanistan, Bhutan and the Maldives. Despite these limitations, the report provides some indications of where South Asian countries stand and what more needs to be done.

Table 3 Regional performance, average by pillars, score (0–100)

Region (alphabetical order)	Pillars			
	Enabling environment	Human capital	Markets	Innovation ecosystem
East Asia and the Pacific	74.1	75.6	67.8	60.0
Eurasia	64.0	68.7	55.5	48.7
Europe and North America	76.9	81.9	64.4	63.2
Latin America and the Caribbean	58.3	70.5	54.8	44.1
Middle East and North Africa	64.7	71.9	58.8	49.8
South Asia	54.8	59.3	56.3	47.1
Sub-Saharan Africa	49.0	47.6	48.8	40.6

Source World Economic Forum (2019)

One of the important aspects, which has been overlooked by the report in terms of assessing the readiness of countries and where South Asia performs significantly better, is the ICT exports, which are worth highlighting here. Although ICT exports may include a whole gamut of exports, and due to a lack of disaggregation of data in terms of areas of exports it may not show how much of these related to 4IR-related sectors, this can provide an indication of the potential the region offers.

According to the World Development Indicators, while the ICT exports in 2017 accounted for 10.5% of the global services exports, in South Asia they constituted 39.2% of overall services exports of the region. Major contributors to the regional exports are: India (42.4%), Nepal (18%), Pakistan (17.5%), Afghanistan (16.4%) Bangladesh (13.6%) and Sri Lanka (12%). The Maldives (3.3%) and Bhutan (0.26%) are two outliers in the region that have a minimal share of ICT exports in their overall services exports (Fig. 3). However, it is yet to be seen how these gains translate into inclusive economic growth, including job creation, particularly for women and more importantly for people living in rural areas.

Although India has been a front runner in the area of ICT exports, Afghanistan, Bangladesh, Pakistan and Sri Lanka seem to be making considerable strides. For example, in Bangladesh, according to Palak (2019), more than 120 companies export information and communications technology (ICT) products worth nearly USD 1 billion to 35 countries. By 2021, this is expected to increase to USD 5 billion.

While ICT exports can provide some guidance, using 4IR technologies to country's advantage, including for exports enhancement requires addressing several gaps in the areas of infrastructure, skills, innovation, institutional framework and regulatory environment (see, for example, Rodrik 2018). However, addressing them is easier said than done.

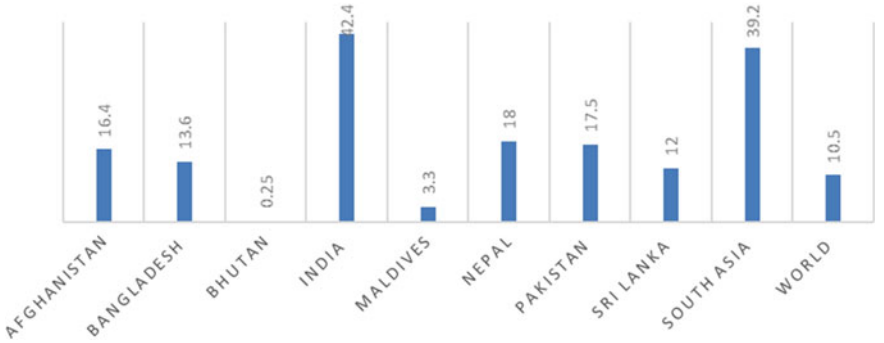

Fig. 3 ICT exports of South Asian countries, South Asia and World, 2017 (% of total service exports). *Source* World Bank (2019a, b)

First, since both physical infrastructure and digital infrastructure are fundamental to gain competitive edge in the 4IR era, this is an area where a number of opportunities can be explored. Since most of the South Asian countries face severe resource constraints to meet their basic social needs, such as the provision of education and health services, they cannot easily mobilize resources for alleviating their infrastructure-related challenges. Therefore, most developing countries rely on a blended financing—a combination of public, private and development finance institutions—to meet the investment gap.

For example, according to the World Bank (2017, 2018b), equity, including private equity, accounts for roughly 25% of the infrastructure financing involving the private sector; and debt, including commercial as well as development finance institutions debts, which accounts for anywhere between 70 and 78% of such financing. Subsidies, if at all, account for very little—between 2 and 4%. The United Nations Capital Development Fund (UNCDF) (2018), for instance, shows various example of how blended finance can be mobilized to finance infrastructure, which is worth replicating in South Asia too.

At the same time, there is a possibility of harnessing the potential of regional cooperation here. For example, the relatively resourceful private sector from countries such as India, Pakistan, Sri Lanka and Bangladesh can invest in other countries in the region. However, for this to happen, there is a possibility of having a regional framework for the promotion and protection of investment in the region, although this may not be a replacement for sound domestic policies to attract and retain FDI.

Second, although the need for skills development cannot be overemphasized, South Asian countries need to understand that there is an added premium on skills development in the 4IR era. Within the category of skills development, there are two critical challenges. First and foremost, skills created in the South Asian countries today do not meet the requirement of the 4IR and therefore require a fundamental overhaul of the education and training systems. This entails, among other things, investing more on STEM education, vocational training and new branches of education and training to enhance skills in the areas of cognitive readiness, emotional

intelligence, judgement and decision-making, service orientation and negotiation, as highlighted above.

There is a potential for regional cooperation in the area of skills development, where new methods of distance learning such as e-learning or online training can be utilized at the regional level to strengthen skills profile of the entire region. For example, a study by KPMG India and Google (2017) shows that India's online education market is expected to grow from USD 247 million to USD 1.96 billion and the number of users from 1.6 million to 9.6 million between 2017 and 2021. Other South Asian countries too are probably adapting to this trend; however, it should be possible for those countries that are either at the lower end of the learning curve or that do not provide diversity and competitiveness to match online education providers from India to take advantage of this opportunity. The service providers in India too should tap into the opportunity.

Another challenge for many countries in the region is due to a lack of structured mechanisms for communications between the academic establishments and the private sector, and several countries face skills mismatch, which can be corrected by an institutionalized form of a dialogue between these actors. More importantly, given the evolving nature of changes in job profiles due to a rapid technological disruption of Schumpeterian proportion, the public sector needs to step up efforts in key areas. These include subsidizing lifelong learning opportunities and providing safety nets to facilitate adjustments during the inevitable period of transition following the Scandinavian motto of "protect workers, not jobs" (Harari 2018).

Third, since the world is moving towards a knowledge-based society with the 4IR further hastening the process, it is an imperative for South Asian countries to put in place their own system of encouraging the import of such technologies, R&D and nurturing innovative and entrepreneurial pursuits. This allows them to add value to imported technologies as well as create their own version of 3D printing, AI and drones that are suitable to their national and regional contexts. This has already been the case in the areas of development of mobile apps; application of aggregation technology based on the concept of sharing economy; and the creation of e-commerce platforms. Many countries in the region have already put their feet on the ladder. Moreover, fostering partnerships between universities and research institutions on the one hand and the private sector on the other, to encourage an increased generation and application of technologies on a quasi-commercial basis should also be explored.

When it comes to fostering partnership, there is no need to confine to national boundaries. Already important research in the domain of development, social and environmental policies, among other things, is taking place in collaboration with various partners in the region. The advent of 4IR is likely to only cement these partnerships. Similarly, the university with regional focus as well as outreach such as South Asian University can strengthen collaboration in this area. However, what is even more important is an inter-governmental initiative in the area of promoting joint R&D in the area of 4IR technologies. Despite the political challenges which have clouded regional cooperation in other areas—the establishment of a South Asian centre for 4IR could be both timely and relevant.

Fourth, since people in many parts of the world, including in South Asia, view 4IR-related technologies and the platform on which they operate with suspicion, both enabling and mitigating policies are required to be put in place to facilitate these countries to benefit from the 4IR. Some policies tend to be cross-cutting in nature as they affect accessibility, availability and application of technologies. Since this issue has already been elaborated above, suffice it to say that a certain degree of policy innovation is required to keep pace with the evolving industry requirements as well as the challenges. Some of the policies can be adopted by the stroke of a pen, while others take time to evolve and mature. However, what is even more important is the actual implementation of policies. Therefore, not only necessary resources—institutional, human, technological and financial—should be made available for the implementation of policies, but also mechanisms for effective monitoring, evaluation and adaptive learning should be put in place. This will not only help South Asian countries to monitor effective functioning as well as impact of policies, but also make continuous improvements through learning based on evidence generated.

There is a potential for regional cooperation in this area—both in terms of designing region-wide policy, for example, on competition, investment, intellectual property protection, data protection and security, but also to learn from each other. Since cooperation in these areas cannot wait until the political challenges bedevilling the region can be addressed, a strong political will from the leaders of the countries in the region to move forward on these agenda is critically important.

Finally, and yet another cross-cutting issue worth highlighting is the central role of partnerships in the entire chain discussed above. The partnership for blood delivery by using drones in Rwanda; the partnership between Maersk and IBM for applying blockchain technology to streamline logistics; the partnership between the Government of Ethiopia and Cardano Foundation to use blockchain technology for the traceability of coffee beans; or the partnerships for infrastructure building highlighted above show that partnerships offer synergies that help in launching and scaling up several useful initiatives. Beyond the examples provided above, there are other varieties of partnerships that could not be covered in this paper. They include those between nation-states, international organizations, regional economic cooperation bodies, donors, foundations, impact investors, cooperatives and non-government organizations or any combination thereof.

5 Conclusion and Agenda for Future Research

The foregoing discussion shows that the 4IR is here to stay and that it is in the interest of the South Asian countries to embrace technologies powering the revolution, being mindful of the fact that there are several challenges that must be overcome if they desire to use it for achieving their development objectives. Some of the challenges mentioned above are not new, as they represent persisting development challenges facing a number of South Asian countries.

Despite all the above challenges, thanks to the agility of the private sector, coupled with the responsiveness of the public sector in select South Asian countries, the 4IR is already being adopted in a few South Asian countries with varying results. Others are in the process of creating the necessary environment to tap into this new source of growth. Encouraging examples include access to electricity; access to and affordability of the Internet in India, Sri Lanka and Pakistan; skills development initiatives in India, Bangladesh and Nepal; and India, Bangladesh and Nepal already tapping into the 4IR opportunities available in the global market. ICT exports, and the possibility they offer to move up the value chain ladder, represent yet another successful example for the entire region. However, these models need to be scaled up as well as replicated, with some fine-tuning, to suit the local circumstances to spread the benefits to all the South Asian countries.

During the recently concluded South Asia Economic Summit XII, held in Colombo in September 2019, lack of evidence-based, well-grounded research both in the region as well as in the countries was highlighted as a major constraint to sound policy making. Although the lack of data and availability of funding could have contributed to such a gap, it is incumbent upon think tanks in South Asia to create some sort of foundation for initiating research in this critical area. Therefore, the following areas of research can be considered in the short to medium term:

First, a comprehensive regional diagnostic on prospects as well as pitfalls of 4IR including enterprise-level data collection supported by case studies for the region could provide a base for South Asian stakeholders to understand where they stand and what needs to be done. This research can also include a component on feasibility study of the establishment of a South Asian Centre for 4IR, discussed above.

Second, since the financing of digital infrastructure—which are a foundation for the 4IR—as noted above, cannot be undertaken by the public resources alone, various models for financing such as public-private partnerships, blended finance and impact investments are being explored in different parts of the world. Success varies from country to country and from region to region, depending on the regulatory framework, cost and benefit sharing modality, limited period of monopoly privilege for a limited duration and fiscal incentives, among other things. Therefore, this could be another area of research worth undertaking at the regional level as well as at the country level.

Third, organizations such as the WEF have identified skills needs of the future, focusing mainly on digitally enabled countries. However, no such skills mapping exercise in preparation for the 4IR seems to have been done in South Asia. A research in this area would not only entail mapping skills requirement for the future, but also understanding the current set of skills available in South Asia as well as various countries in the region. The study should also identify gaps and propose policy pointers on what can and should be done at the national as well as regional level.

Fourth, as the private sector in many South Asian countries have already adopted 4IR technology, without waiting for the government to put in place a regulatory framework—for example in areas such as privacy, data protection, consumer protection, social security, fiscal incentive, competition (discussed further below)—there is a need to identify gaps in the area of the regulatory framework. A regional study in

this area should include both enabling regulations as well as mitigating regulations, as discussed above.

Finally, a highly concentrated market structure in the 4IR technologies and consolidation of dominant positions by key players may not augur well for the future development and more importantly democratization of these technologies. There may be severe implications for the end-users should the dominant players abuse their market power. Therefore, a study to understand the implication of the current market structure of 4IR sectors and policy response at the national, regional and international levels might help to fill the existing knowledge gap in this area.

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