

BINDING CONSTRAINTS TO REGIONAL COOPERATION AND INTEGRATION IN SOUTH ASIA

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EXECUTIVE SUMMARY

To be meaningful, economic growth must be inclusive but the challenge is how to accomplish this goal. The presence of a wide poverty divide in the midst of rapid economic growth has prompted a rethinking of growth strategies and interventions for poverty reduction. Many countries are exploring cooperation and integration at the regional and global levels in their pursuit of inclusive growth and South Asia is no exception.

Policy makers in the South Asian region believe that there is a significant case for greater cooperation and integration in South Asia, which is expected to contribute to more rapid growth, poverty reduction and greater political stability for the region. Various scholars have noted South Asia as “experiencing a new economic era” today. However, although a regional cooperating body was established in the region more than 25 years ago in the form of the South Asian Association for Regional Cooperation (SAARC), the level of integration in South Asia still remains low.

There are many reasons behind the failure to achieve regional cooperation and integration in the region and identifying the most binding constraint or constraints was deemed to be the first critical step in mapping out a workable strategy to achieve sustainable regional cooperation and integration.

In line with this objective, the South Asia Regional Department (SARD) of the Asian Development Bank conducted a High Level Forum (HLF) on Emerging Vision for Shared Prosperity: South Asia and Beyond in April 2009 and Post-HLF country consultations in Bangladesh, Bhutan, Maldives, Pakistan Nepal and Sri Lanka. The HLF identified the following priority areas for deepening RCI in the region: (1) Transport Corridors (2) Energy Trade and (3) Trade Facilitation.

Taking off from the aforementioned consensus about the priority areas, which are perceived to be the most critical barriers to South Asian regional cooperation and integration, this report attempts to identify the binding constraints to achieving more efficient transport corridors, regional energy trade and trade facilitation in the region. The growth diagnostics approach of Hausmann, Rodrik and Velasco provided a convenient framework for a constraint analysis of each of those priority areas.

The constraint analysis of those priority areas revealed the following:

Trade Facilitation. While the region’s total trade volume has been increasing for the past ten years, intra-regional trade remains very low. The pace of tariff reforms under the existing South Asia Free Trade Agreement (SAFTA) has been very slow and overshadowed by fragmented bilateral agreements within the region as well as outside of the region. For trade facilitation to spur regional cooperation and inclusive growth, the following significant constraints should be addressed: (1) high tariff walls; (2) inefficiencies in ports operation and logistics performance; (3) inefficient custom and regulatory environment, and land or cross-border procedures; and (4) unresolved regional and internal political conflicts and strife. Eliminating high tariff walls and non-tariff barriers, simplifying customs and border requirements and improving the trade-related infrastructure will facilitate greater trade and interaction among countries of the region, which in turn will enable the region to realize the potential benefits of intra-regional as well as inter-regional trade.

Energy Trade. South Asia’s energy sector is diverse with a relatively developed coal-reliant Indian energy sector, relatively underdeveloped energy sector in Bhutan and Maldives and a hydro-rich energy sector in Nepal and Sri Lanka. The South Asian region is a net energy importer and fast growing demand for energy makes energy security a major concern. The

electricity and gas shortage in the region has been described as persistent and recurring. Without a resolute action on the part of policymakers, it will hamstring growth in the region. There is great potential for energy trading within the region but intra-regional energy trade is low. Policymakers should address the following significant constraints: (1) inadequacy of domestic energy supply for energy trade; (2) inadequacy of private sector participation; (3) poor energy utility operational performance; (4) inadequacy of cross-border energy trade infrastructure; (5) immaturity of domestic energy sector regulatory frameworks; (6) inadequate access to finance and a reliable business environment; and (7) inadequacy of project development information.

Transport Corridors. Strong and well-connected transport infrastructure is crucial for unlocking economies of scale and improving competitiveness, especially for the landlocked countries in the region. The fragmented nature of South Asia's transport system however, has rendered the critical transport corridors inefficient. South Asia's transport corridors generally are characterized by poor road conditions, lack of intraregional connectivity between the national road networks, undeveloped rail and inland water freight transport, and inadequate road and rail connectivity to ports. On the other hand, the lack of transit agreements and protocols is also considered as a binding constraint. The development of those transport corridors has been identified as a key to bring down the cost of transport of people and goods and improve the competitiveness especially of landlocked countries. While some of the constraints can be addressed at the national and bilateral levels, the full potential of the transport corridors can only be realized thru regional cooperation and integration. The public sector can do much to improve the state of transportation corridors but exploring various modalities under public-private partnerships will unlock private capital and expertise for much-needed investments in transport corridors.

Cost of Finance. Private sector investment and the cost of finance were also highlighted as relevant cross cutting issues inasmuch as lack of private sector investments in the various sectors has been repeatedly identified as a major constraint. The dominance of the banks and bank loans and the state of capital markets in the region indicate that the financial system in South Asia is still relatively underdeveloped. However, while some reforms are needed to make the financial system more efficient, the cost of finance in the region is not considered as a critical constraint. The report suggests that other factors such as regional instability or conflict, poor infrastructure, weak regulatory frameworks may have been more critical constraints to growth and poverty reduction than just borrowing costs.

Political conflicts and unresolved regional issues were identified as major crosscutting concerns that have constrained trade facilitation, energy trade and the development of transport corridors. Addressing them by countries in the region is a key issue.

Moving forward, greater cooperation and integration in South Asia is possible. However, the region can only reap the benefits of cooperation and integration (e.g. rapid growth, poverty reduction and greater political stability) once the binding constraints to regional cooperation and integration are addressed.

CHAPTER 1

THE BENEFITS OF REGIONAL COOPERATION AND INTEGRATION AND BINDING CONSTRAINTS: SOUTH ASIAN PERSPECTIVES

I. INTRODUCTION

1. Inclusive growth is the rallying call of the development community, composed of developing country governments and multilateral and bilateral donor institutions in the face of deep and pervasive poverty, which has trapped millions of households in seemingly perpetual state of helplessness and vulnerability. The presence of a wide poverty divide in the midst of rapid economic growth has prompted a rethinking of growth strategies and poverty reduction interventions. Economic growth to be meaningful, to matter must be inclusive and the challenge is how to accomplish this goal. The traditional view that an economy can export its own, individual and unilateral way to growth through the exploitation of the opportunities offered by globalization and trade liberalization will not be a sufficient strategy for sustained growth and rapid reduction of poverty levels, especially in the post-global financial crisis period and in a world in the crest of competition and concerns about climate change and demographic transitions. Relentless, individual or unilateral pursuit of export markets, which benefited and transformed the economies of Japan, Taiwan and South Korea, the East Asian miracle, may no longer be an adequate pathway for growth and poverty reduction for many developing economies.

2. Today, many countries are exploring cooperation and integration at the regional and global levels in their pursuit of inclusive growth. The ASEAN countries' transformation into an economic powerhouse of the East Asian region got a significant boost from opportunities offered by regional cooperation, complementation and integration. In the case of South Asia, unilateral trade liberalization policies introduced in the second half of the 1980s and on to the 1990s contributed to the expansion of trade with the outside world (Ahmed and Ghani, 2007)². However, South Asian intra-regional trade has remained small relative to the region's trade with the outside world. While the post-World War II intra-regional trade as a share of total trade in South Asia was 18%, this has been reduced to around 5% in the early 2000s. Regional trade is less than 2% of GDP in South Asia in contrast to around 40% in East Asia.

3. Policy makers in the South Asian region believe that there is a significant case for greater cooperation and integration in South Asia, which is expected to contribute to more rapid growth, poverty reduction and greater political stability for the region. Wignaraja, Francois and Rana (2009)³ have noted South Asia as "experiencing a new economic era" today. These scholars pointed out the rapid growth in the region after the economic reforms of the 1980s and 1990s. The South Asian Association for Regional Cooperation (SAARC) was established in 1985. A more favorable regional trade and investment environment exists with the liberalization of foreign direct investment regulations, implementation of the South Asia Free Trade Agreement (SAFTA), increased bilateral free trade agreements (FTAs), and market-friendly economic policies. Countries of the region are aware of the benefits of cooperation and integration and they have in fact established institutions and agreements that are intended to yield greater cooperation in trade, security and other economic matters. These regional institutions are important in the sense that there could provide a much-needed overarching institutional arrangement or framework that would help facilitate the process of regional cooperation and integration. Annex 1-1 shows the list of regional institutions or organizations for regional cooperation and integration.

² Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

³ Francois, Joseph F. & Wignaraja, Ganeshan, & Rana, Pradumna Bickram (Editors). 2009. Pan-Asian integration: linking East and South Asia. Palgrave Macmillan, Houndmills, Basingstoke ; New York.

4. Notwithstanding the persistent effort of South Asian countries toward deepening regional cooperation and integration, this goal has remained elusive. Wignaraja, Francois and Rana (2009)⁴ concede that the level of integration in South Asia remains low, with a host of challenges such as underinvestment in infrastructure, variable logistics efficiency, cumbersome bureaucratic regulations, high trade barriers, and low levels of firm-level technological capacity. Kardar (2010)⁵ pointed out that “it took ten years to agree (*sic*) the preferential tariff agreement and another ten years to devise SAFTA” making South Asia the “least integrated region in the world”. SAFTA is the South Asian Free Trade Agreement, a landmark agreement that took many years of discussion, review, and negotiation to sign. Indeed, South Asia was fairly late in embracing the concept of regional integration, taking it ten years after the initial establishment of the South Asian Association for Regional Cooperation (SAARC) in 1985 to pay attention to trade promotion through a regional agreement (Weerakon, 2010)⁶.

5. However, despite the slow pace of regional cooperation and integration, there is scope for achieving this goal. There is a common view that people of South Asia have natural affinities based on shared history, geography, and culture and there is a natural bonding amongst the people, which transcends the relationship between countries and governments (Behuria, 2009⁷; Kardar 2010⁸). These natural affinities could be the springboard for achieving a seemingly elusive goal.

6. There are many reasons behind the failure to achieve regional cooperation and integration in South Asia as pointed out by various studies. Although hopeful about the prospects of regional cooperation and integration one scholar lamented about “a sense of skepticism, which prevails with respect to economic integration in the South Asian region” (Das, 2009)⁹. Those reasons remain as valid constraints and it would take the concerted effort of countries in the region to successfully deal with them. Identifying the most binding constraint or constraints to regional cooperation and integration is an important, first critical step in mapping out a workable strategy to achieve the objectives of regional cooperation and integration.

7. In this respect, fostering and supporting Regional Cooperation and Integration (RCI) is one of the main pillars of ADB's Strategy 2020. For South Asia, ADB South Asia Regional Department (SARD) plays a key role in fostering regional cooperation. As a part of its on-going efforts, in April 2009, SARD organized the High Level Forum (HLF) on Emerging Vision for Shared Prosperity: South Asia and Beyond. The HLF provided a venue to discuss the vision, priorities, broad approaches and next steps for promoting RCI in South Asia and beyond. During the forum, participants recognized the importance of adopting a flexible, multi-track approach to advance regional cooperation in South Asia and recommended fast tracking the implementation of tangible regional projects as a mechanism toward a deepening of regional cooperation and integration.

8. Post-HLF country consultations were held with Bangladesh, Bhutan, Maldives, Pakistan Nepal and Sri Lanka to further discuss the consensus reached during the HLF.

⁴ Francois, Joseph F. & Wignaraja, Ganeshan, & Rana, Pradumna Bickram (Editors). 2009. Pan-Asian integration: linking East and South Asia. Palgrave Macmillan, Houndmills, Basingstoke ; New York.

⁵ Kardar, Shahid. 2010. South Asia-Intra Regional Cooperation: The Way Forward (Draft Report May 2010). Page 9.

⁶ Weerakon, Dushni. 2010. SAFTA Current Status and Prospects. Chapter 3 in World Bank's "Promoting Economic Cooperation in South Asia" edited by Sadiq Ahmed, Saman Kelegama, Ejaz Ghani. 2010.

⁷ Behuria, Ashok (Editor). 2009. South Asia: The Quest For Regional Cooperation. Publisher: Institute for Defence Studies and Analyses.

⁸ Kardar, Shahid. 2010. South Asia-Intra Regional Cooperation: The Way Forward (Draft Report May 2010).

⁹ Das, Ram Upendra. 2009. Regional Economic Integration in South Asia-Prospects and Challenges. RIS Discussion Paper # 157. Research and Information System for Developing Countries. Page 2.

Consultations with Afghanistan and India are also planned. Based on the deliberations of HLF, supplemented by in-country consultations, the following priority areas for deepening RCI in the region have emerged. Each of these has strong positive correlation with national growth and poverty alleviation as well as providing opportunities for greater involvement of the private sector. The priority areas are:

- Transport Corridors (roads/rail/ports and possible air)
- Energy trade (bilateral as well as third country thru right of way)
- Trade Facilitation (including border trade facilities)

9. This is an implicit application of a constraints analysis framework to a number of competing regional projects that are important for regional integration. The process of selecting the most critical regional projects for implementation is an important step toward regional integration. The above-mentioned priority areas were identified during deliberations of the HLF and in-country consultations as key areas requiring the immediate attention of policy makers¹⁰.

10. The identification of transport corridors, energy trade and trade facilitation as priority areas draws justification from findings of recent surveys. Ahmed and Ghani (2007)¹¹ reported firm level surveys of investment climate identifying infrastructure, particularly power, as a major constraint to growth in South Asia. Power outages are a major concern in India where, on average, manufacturers face almost 17 power outages per month compared to 1 in Malaysia and less than 5 in China. In Pakistan, local businesses estimated losses of 5.6% in annual sales revenue attributable to power outages against a reported loss of 2% by Chinese businesses. The logistics costs are very high and ranges between 13-14% of GDP, compared to 8% in U.S. (Ramatullah, 2010)¹². The cost of trading across borders is very high. It takes 200 signatures in Nepal to trade goods with India, and some 140 signatures in India to trade goods with Nepal. It takes an average of more than 33 days to export from South Asia compared to 12 days from OECD countries, and more than 46 days to import into South Asia compared to 14 days for OECD (Ahmed and Ghani, 2007)¹³.

Motivation of the paper

11. This paper draws from the literature to examine the benefits of regional cooperation and integration in order to inform policy makers of the cost of not seriously addressing the binding constraints to regional cooperation and integration. Component papers in this volume analyze the current state of play in the above-mentioned three priority areas, which are perceived to be critical constraints to South Asian regional cooperation and integration¹⁴ and identifies the binding constraints to achieving more efficient transport corridors, regional energy trade and trade facilitation in the region.

12. This presents the framework to be used by the component papers on trade facilitation, energy trade and transport corridors in identifying the most binding or critical constraints to these three areas. The analytical framework used is the growth diagnostics approach which helps decision makers to ascertain a feasible set of policy solutions to the identified problems. As shown by the pioneering work of Hausmann, Rodrik and Velasco

¹⁰ There is no attempt to do a diagnostic study on the constraints to regional cooperation and integration per se but instead, this study focuses on the priority areas identified by the High Level Forum conducted on April 2009.

¹¹ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

¹² Rahmatullah. 2010. Presentation for CPD Dhaka 4 March 2010.

¹³ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

¹⁴ The component papers are on trade facilitation prepared by Gilberto Llanto with the assistance of Lawrence Nelson Guevara, transport corridors by Nigel Rayner, and regional energy by P. N. Fernando.

(2005)¹⁵, this approach yields more tractable policy choices, which can address binding constraints to growth, and in the case of this paper to regional cooperation and integration. The approach follows the principle of parsimony, which makes it realistic in view of limited stock of political capital available to decision makers. In other words, a constraint analysis will help policymakers in the region in designing policy solutions that will work for deepening cooperation and integration in the region. The Asian Development Bank has pioneered in the application of the diagnostics framework in analyzing the critical development constraints in Nepal, Indonesian and the Philippines¹⁶. The results of these ADB diagnostics studies have been received well by policy makers in those countries.

13. The findings of those component papers will provide inputs to the formulation of SARD's Regional Cooperation and Integration Strategy. They will complement and supplement ongoing and completed SARD led studies including:

- The Economics of Regional Cooperation and Integration in South Asia—Why RCI?
- The Institutions of Regionalism in South Asia—Do Institutions Matter?
- Managing Regional Public Goods in South Asia—Opportunities out of Threats
- RCI and Poverty Alleviation—The Links
- Can Regional Cooperation Thrive in a Challenging Political/Security Environment in South Asia?

14. The four papers (comprised of the current paper and the three component papers) in this volume analyze the potential gains from deepening RCI in the South Asia and the constraints faced to enhancing development in the aforementioned three priority areas identified through consultations with governments in the region. They attempt to answer the following questions¹⁷

- What are the potential gains from deepening regional cooperation and integration (RCI) in South Asia? What are the potential benefits of increased intra-regional trade in South Asia?
- In particular, what are the constraints to RCI in the area of trade facilitation? Energy trade? Transport corridor?
- What policy options can be tapped in order to overcome the binding constraints in those three priority areas?

¹⁵ Hausmann, R., D. Rodrik, and A. Velasco. 2005. *Growth Diagnostics*. Cambridge MA: John F. Kennedy School of Government, Harvard University.

¹⁶ Asian Development Bank, 2007. *Philippines: Critical Development Constraints*; Asian Development Bank, 2009. *Nepal: Critical Development Constraints*; Asian Development Bank, 2010. *Indonesia: Critical Development Constraints*.

¹⁷ Source: Terms of Reference for the paper.

The Diagnostics Growth Framework as an Approach

15. The component papers use the Hausmann-Rodrik-Velasco (HRV) growth diagnostic approach, which identifies the most critical binding constraint to growth and priorities and sequence of policy actions required to ignite or sustain growth. ADB (2009)¹⁸ points out that it differs from the “laundry list” approach, as implied by the Washington Consensus, and recognizes that the economic and political environment differs a great deal among developing countries. There is no “one-size-fits-all” solution to development problems, and thus, the ranking of policy priorities contingent on country-specific circumstances is crucially important. It recognizes that developing countries may not have adequate capacity to implement a wide array of policy reforms at the same time. With the priority ranking yielded by a diagnostic approach, policymakers can start with reforms in a few critical areas that constrain growth. It is a practical tool for policy makers and development planners to use in formulating country-specific growth strategies.

16. The component papers apply a diagnostic approach for determining the most binding constraints to trade facilitation, regional energy trade and transport corridors in the region. The HRV diagnostics framework is a useful tool for isolating the most significant constraint to trade facilitation, regional energy trade and transport corridors and for identifying a feasible set of policy options to remove binding constraints in these priority sectors.

17. It is recognized that there is a vast array of constraints to the attainment of efficient transport and energy services and trade facilitation. The diagnostics framework is used here to rank order the constraints according to their significance, which helps in ordering policy priorities on country-specific or region-specific circumstances. Lacking the capacity to simultaneously address the identified constraints, policy makers in the region or countries concerned will have a practical tool to use in formulating and agreeing on a feasible set of policy options to address the identified binding constraints.

18. The sector studies on the priority areas identified by HLF started with a set of the most likely or proximate constraints to these priority sectors; investigated and determined which constraints pose the greatest obstacles to these priority sectors, and finally explained how those constraints may be addressed. The consultants used a variety of evidence-macroeconomic, financial, and social indicators; findings from investment and business surveys; results of regression analysis; insights from in-depth case studies; and benchmarking with other similarly situated countries to identify the critical constraints to transport corridors, energy trade and trade facilitation.

19. What follows is a suggested HRV-type diagnostics framework for regional cooperation and integration. The framework breaks down the constraints to regional cooperation and integration into three: regional, national and other. As one moves down the problem tree-like structure, one can find several factors that are hypothesized to constrain regional strategy and agreement, and political conflicts and insecurity, respectively. Moving along this framework helps one to find the binding constraints regional cooperation and integration.

¹⁸ ADB. 2009. Philippine Critical Development Constraints.

Constraints analysis of regional cooperation and integration

Domestic/Subregional	Regional	Other
<p>Are domestic supplies/facilities adequate?</p> <p>Are there sufficient private sector investments?</p> <p>Are there low economic returns to private sector?</p> <p>Are the social returns low?</p> <p>Are there geographical challenges?</p> <p>Is human capital inadequate?</p> <p>Is there sufficient public investment?</p> <p>Is the supporting infrastructure in place?</p> <p>Is there sufficient public investment?</p> <p>Is the private appropriability poor?</p> <p>Are incentives adequate?</p> <p>Is the cost of doing business high?</p> <p>Are there high taxes imposed?</p> <p>Is governance weak?</p> <p>Are the domestic regulatory frameworks conducive?</p> <p>Is there macro-economic, policy, or political instability?</p> <p>Are there security risks and conflicts?</p> <p>Is there adequate access to financing?</p> <p>Are capital markets and banks adequate and developed?</p> <p>Are there adequate avenues for public/private dialogue?</p>	<p>Are the national policies/objectives aligned with each other to facilitate RCI?</p> <p>Is there a strong collaboration among leaders and individual governments?</p> <p>Are there existing integrated master plans?</p> <p>Are there sufficient investments at the regional level?</p> <p>Are there adequate incentives for investment?</p> <p>Is there adequate access to regional financing?</p> <p>Is there support from regional/multilateral institutions?</p> <p>Are there geo-political conflicts/issues?</p> <p>Are the national infrastructure facilities complimentary, compatible and ready for connectivity?</p>	<p>Is there a Missing Market?</p> <p>Is there a common institution that can administer the missing market?</p> <p>(particular for energy trade)</p>

20. This Chapter is organized as follows. After a brief Introduction (**Section I**) that explains the motivation of the paper, **Section II** provides an overview of the regional cooperation and integration and a profile of South Asian countries that provide the context and backdrop for the constraints analysis done by the component papers. **Section III** points out the benefits of deepening regional cooperation and integration as may be gleaned from recent studies of the South Asian region. It reports the results of available empirical work on the benefits of regional cooperation and integration in South Asia¹⁹. Those empirical studies were excellent sources of understanding the effects of regional integration of South Asian countries. The final section, **Section IV** explains why regional cooperation and integration has been slow and provides concluding remarks.

¹⁹ Time and budget limitations prevented the authors of this paper from doing some empirical investigation of the potential benefits of regional cooperation and integration.

II. SOUTH ASIAN REGION: MACROECONOMIC OVERVIEW

21. This section provides a macroeconomic overview of the South Asian to provide context to the ensuing discussion on constraints to trade facilitation, transport corridors, and energy trade. There is no attempt to provide a comprehensive and detailed account in view of the many excellent sources, e.g., Asian Development Outlook series, and studies (Ahmed, 2010²⁰; Ahmed and Ejaz, 2007²¹; Dasgupta, 2010²², among others), which provide more extensive and in-depth information on the region.

22. South Asia is the southern region of the Asian continent surrounded (clockwise, from west) by Western Asia, Central Asia, Eastern Asia, Southeastern Asia and the Indian Ocean. In this paper, South Asia refers to the sub-Himalayan countries of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

23. As of 2008, South Asia is home to about 1.5 billion people, almost a quarter (23.15%) of the world population²³ making it both the most populous and most densely populated geographical region in the world. Despite this magnitude, the region only accounts for about 2.48%²⁴ of the world's GDP (Table 1-1). GDP per capita ranges from US\$366 (Afghanistan) to US\$4,135 (Maldives).

Table 1-1. South Asia Population, GDP and GDP per Capita. 2008.

Country/Region	Population	%	GDP (US\$ Current)	%	GDP Per Capita
Afghanistan	29,021,099	0.43%	10,624,133,954	0.02%	366.08
Bangladesh	160,000,128	2.40%	79,554,350,678	0.13%	497.21
Bhutan	686,789	0.01%	1,283,387,623	0.00%	1,868.68
India	1,139,964,932	17.08%	1,159,170,000,000	1.96%	1,016.85
Maldives	305,027	0.00%	1,261,265,652	0.00%	4,134.93
Nepal	28,809,526	0.43%	12,614,887,136	0.02%	437.87
Pakistan	166,111,487	2.49%	164,539,000,000	0.28%	990.53
Sri Lanka	20,156,204	0.30%	40,564,708,948	0.07%	2,012.52
South Asia	1,545,055,192	23.15%	1,469,611,733,991	2.48%	
World	6,674,256,345		59,158,105,682,476		

Source: World Development Indicators 2010.

²⁰ Ahmed, Sadiq. 2010. "Trade and Regional Cooperation for Growth and Poverty Reduction in South Asia," a presentation to Presentation to the IGC Trade Program, School of International and Public Affairs, Columbia University, New York, March 25.

²¹ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

²² Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

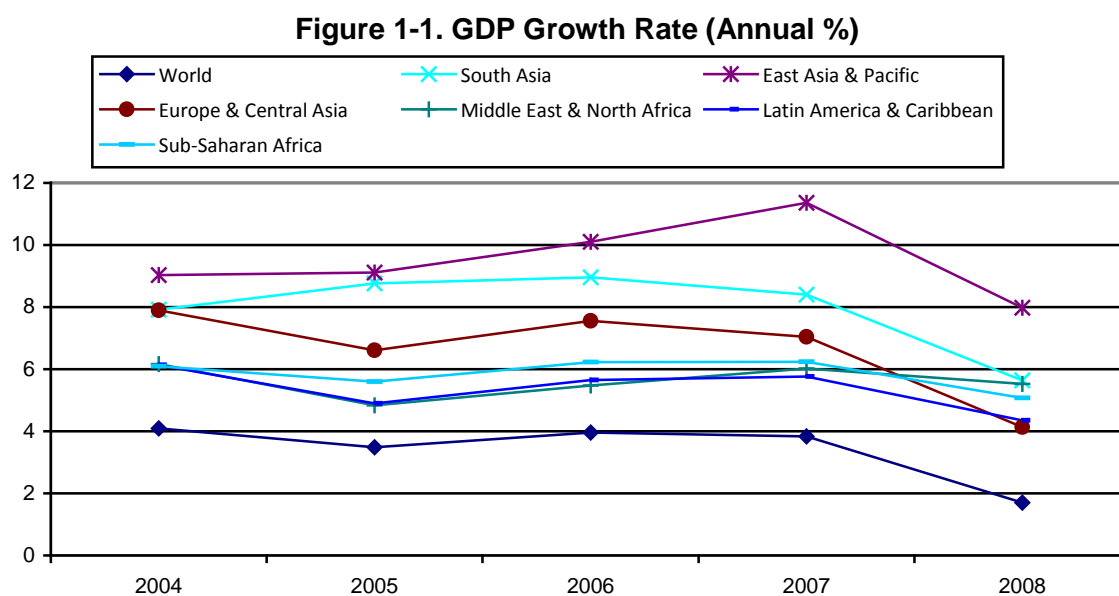
²³ World Development Indicators 2010.

²⁴ World Development Indicators 2010.

South Asian progress: growth and poverty

24. Ahmed (2010)²⁵ noted that between 1960 and 1980, growth in South Asia was slow (only 3.7 percent per year). This slow pace was attributed to the inward looking control-oriented policies which caused high dependence on low-productivity agriculture, inefficient and low levels of industrialization, weak export performance, and inadequate creation of good jobs. This trend changed in the 1980s as the region adopted pro-growth policies by opening up markets to international competition, replacing public sector with the private sector as the engine of growth, and improving macroeconomic management. As a result, South Asia's growth rate climbed to around 5.7 percent during 1980-2000.

25. Recent estimates show that South Asia's GDP growth has been modestly increasing from 2000 onwards, except in 2007 and 2008 presumably due to the global financial crisis, although the impact has been much better compared to other regions, riding on the strength of policy reforms that have paid off in terms of more rapid growth especially in India (Figure 1-1).

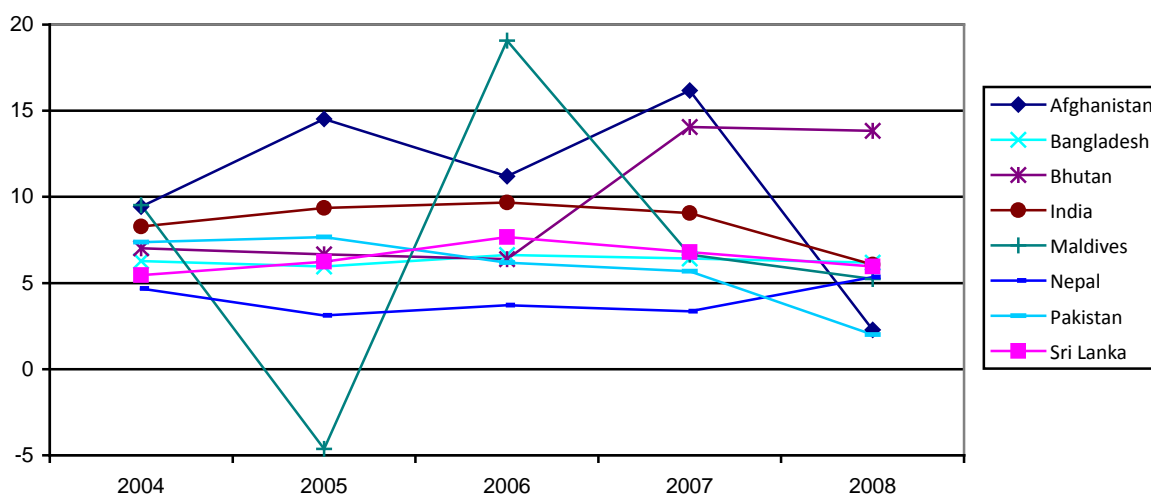


Source: World Development Indicators, 2010, World Bank.

26. The same trend is generally reflected at the subregional level, save for Nepal, which posted a modest growth despite the crisis in 2008 (Figure 1-2).

²⁵ Ahmed, Sadiq. 2010. "Trade and Regional Cooperation for Growth and Poverty Reduction in South Asia," a presentation to Presentation to the IGC Trade Program, School of International and Public Affairs, Columbia University, New York, March 25.

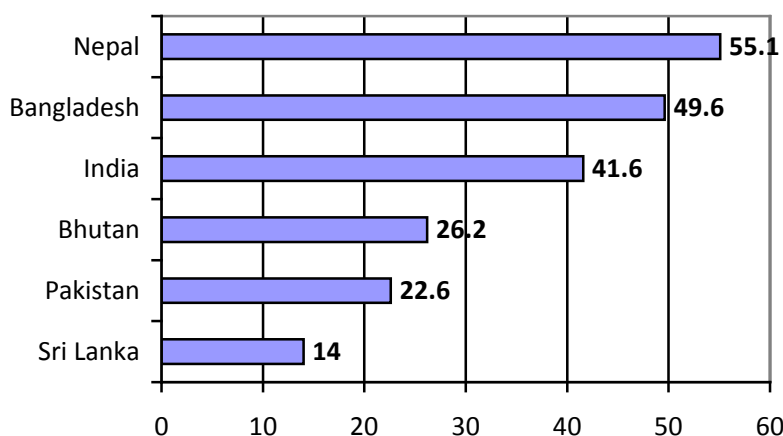
Figure 1-2. GDP Growth Rate of South Asian Countries (Annual %)



Source: World Development Indicators, 2010, World Bank.

27. Poverty has also come down sharply over the past few years in view of the creditable growth performance of the region as may be seen in Table 3 above. However, almost all of the South Asian countries (no reports for Afghanistan and Maldives) still have a significant proportion of its respective population living on less than US\$ 1.25 a day²⁶ (Figure 1-3).

Figure 1-3. Economies with more than 10% of the population live on less than US\$ 1.25/day.

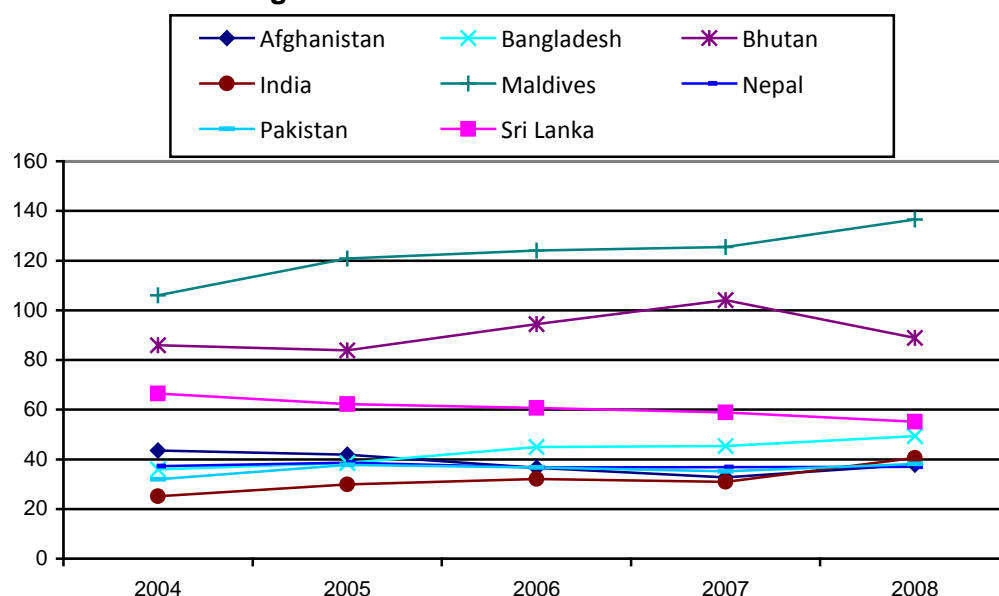


Source: Key Indicators 2009, ADB.

28. In terms of trade, merchandise trade to GDP ratios were generally increasing or stable for the past five years with the exception of Afghanistan and Sri Lanka, which have been adversely affected by internal conflicts (Figure 1-4).

²⁶ ADB. Key Indicators 2009.

Figure 1-4. Merchandise Trade to GDP



Source: World Development Indicators 2010

29. However, while the total value of exports has been increasing (except in 2009), intra-regional trade has remained very low (Table 1-2). The direction of trade has been toward the OECD countries and lately to the People's Republic of China.

Table 1-2. SAARC Exports.

Year	SAARC Exports			% of Total Exports		Growth Rate (%)		
	Intra	Extra	Total	Intra	Extra	Intra	Extra	Total
2000	2,894,020.78	60,603,596.62	63,497,617.40	4.56%	95.44%			
2001	3,569,284.99	62,459,185.81	66,028,470.80	5.41%	94.59%	18.92%	2.97%	3.83%
2002	3,814,593.64	67,500,997.06	71,315,590.70	5.35%	94.65%	6.43%	7.47%	7.41%
2003	5,554,904.30	79,830,910.70	85,385,815.00	6.51%	93.49%	31.33%	15.45%	16.48%
2004	6,540,156.06	96,512,681.94	103,052,838.00	6.35%	93.65%	15.06%	17.28%	17.14%
2005	8,618,943.26	121,676,186.74	130,295,130.00	6.61%	93.39%	24.12%	20.68%	20.91%
2006	9,642,883.28	147,407,103.72	157,049,987.00	6.14%	93.86%	10.62%	17.46%	17.04%
2007	12,747,482.78	181,826,500.22	194,573,983.00	6.55%	93.45%	24.35%	18.93%	19.29%
2008	13,089,987.08	209,911,613.92	223,001,601.00	5.87%	94.13%	2.62%	13.38%	12.75%
2009	11,701,862.87	189,670,951.13	201,372,814.00	5.81%	94.19%	-11.86%	-10.67%	-10.74%

Source: Direction of Trade Statistics (DOTS) Website, IMF. 2010.

III. WHY INTEGRATE? THE BENEFITS OF COOPERATION AND INTEGRATION

30. “Regional integration” refers to a process through which economies in a region become more interconnected due to market-led and private sector driven actions, and/or government-led policies and collective initiatives in the region. Regional integration exists in regional markets such as the European Union (EU) and while the free trade agreements such as the Asian Free Trade Area (AFTA) will eventually result into integration with the support and collaboration of countries which are signatory to those agreements. The degree of economic integration ranges from preferential trade arrangements (PTA) to free trade area (FTA), customs union (CU), common market (CM) and economic union (EU)²⁷. The rise of regional trading blocs has resulted in having more than half of world trade conducted between members of regional trading arrangements on a preferential basis and not on a most-favored nation (MFN) basis.

31. A working definition of regional cooperation is the move to establish linkages between and among a group of countries within a given geographical space, motivated by common and shared interests to cooperate in the areas of trade and other economic sectors, with a view to achieve a Free Trade Area and subsequently to establish a Customs Union (Economic Commission for Africa, 1997)²⁸. Regional integration is occurring amidst globalization and liberalization of world trade through the formation of various regional economic and trading blocs such as the North American Free Trade Agreement (NAFTA) in North America, Latin American Integration Association (LAIA) in Latin America and ASEAN in East Asia, among many others.

32. “Regional cooperation” refers to those collective policies and initiatives by the governments, which, in turn, could be either formally embodied in intergovernmental treaties or informally agreed upon by the participating countries. The Chiang Mai initiative of ASEAN countries to cooperate on a range of monetary policies is an example of a regional cooperation effort.

33. These two concepts can be mutually reinforcing in the sense that regional cooperation can deepen regional integration and at the same time rising regional integration can prompt, and even compel, governments to cooperate collectively to internalize externalities created by integration²⁹.

34. Regional initiatives are essentially more complicated and difficult to manage than country-level initiatives. For example, a road construction project being implemented at the country-level is relatively vastly simpler to carry out than a road project linking two countries. Each additional country involved in regional initiatives exponentially increases the complexity,

²⁷ Hussain Moazzen, Iyanlur Islam, and Reza Kibra, 1999. South Asian Economic Development: Transformation opportunities and challenges; (London, New York, Rutledge, 1999), p. 146.

²⁸ In contemporary economic theory, economic cooperation is also used to mean "regional economic integration" and follows these main processes: (a) establishment of a Free Trade Area involving the removal of tariff and non-tariff barriers to trade; (b) establishment of a Customs Union whereby all restrictions to trade and factor movements within the area are completely eliminated, and of a common external tariff; (c) achievement of an Economic Union among the member States, which implies the harmonization, to some extent, of economic, monetary, fiscal, social and other sectoral policies; (d) attainment of a supra-national union where the respective governments completely subordinate their sovereignty over policies to a supra-national authority, and which may ultimately lead to the alignment of the countries involved into a single state. The underlying motivations may also include the desire for the member countries to promote a common defense and security front or strengthen their economic independence and empowerment vis a vis the rest of the world (Economic Commission for Africa, 1997).

²⁹ ADB. "Regional Cooperation and Integration Strategy. July 2006.

costs and risks of negotiations. Moreover, differential benefits accruing to the parties involved in the agreement will motivate different responses to calls for commitments, including the shouldering the costs of the initiative. It may be that countries stand to benefit in different degrees from the initiative and this may trigger calls for paying only a 'fair' share of the common costs.

35. A 'fair' share is a negotiable issue that can test the skills of the parties involved. In addition to actual or imagined local political problems of distrust, the reading of a free rider problem in a given initiative will likely act as real barrier to cooperation. Building regional cooperation and integration may be fraught with difficulties but it continues to offer an important platform for strengthening the economies of cooperating countries and providing them with a potential for inclusive growth. By working together, cooperating countries can unlock their vast economic potential and collectively address common development challenges of achieving sustained, rapid growth, and reducing poverty.

The benefits of regional cooperation and integration

36. At the onset, it should be stated that regional cooperation and integration is not the panacea for the problem of inclusive growth. Regional integration is not an absolute good³⁰. In fact, scholars such as Ahmed and Ghani (2007)³¹ caution us that focusing on regional integration alone will not generate the beneficial productivity and growth effects of integration because of its economic characteristics such as the small regional market relative to the world both in terms of GDP and trade flows, and the high level of protection. Because complementarities between South Asian countries are limited, integration within the region and better integration with East Asia and the rest of the world was suggested as a more appropriate strategy for growth and development (Wignaraja, Francois and Rana, 2009)³². However, the general view about regional cooperation and integration is one of optimism. It is seen as a "route to economic prosperity" (ADB, 2009)³³. The discussion of trade complementarities below indicates a scope for greater intra-regional trade and economic integration.

37. South Asia is a relative newcomer to global integration. Despite liberalization, it lags other regions on openness. When external protection is high, trade diversion is likely to dominate trade creation, and so the risks that regional integration will become a drag on growth in South Asia is high. There are three reasons why South Asia will need to further lower external trade barriers: to generate classical gains from trade, to lessen the chances that trade diversion will occur, and to reduce income transfers between member countries resulting from regional integration and the tensions that can arise from such transfers (Hoekman and Schiff, 2002).

38. It is noted that South Asia has made significant progress in integrating with the global economy even as integration within the region has remained limited. Nevertheless, regional cooperation and integration open opportunities for growth, productivity, addressing problems of energy shortage, and reduction of regional conflicts (Ahmed and Ghani, 2007)³⁴.

³⁰ Khan, Haider and Larik Zulfikar, *Globalization and Regional Co-operation in South Asia - A Political and Social Economy Approach*

³¹ Ahmed, Sadiq and Ghani, Ejaz. 2007. *South Asia: Growth and Regional Integration*, Macmillan.

³² Francois, Joseph F. & Wignaraja, Ganeshan, & Rana, Pradumna Bickram (Editors). 2009. *Pan-Asian integration: linking East and South Asia*. Palgrave Macmillan, Houndmills, Basingstoke ; New York.

³³ Asian Development Bank, 2009. *Study on Intraregional Trade and Investment in South Asia*, Page 1. Mandaluyong City: Asian Development Bank.

³⁴ Ahmed, Sadiq and Ghani, Ejaz. 2007. *South Asia: Growth and Regional Integration*, Macmillan.

39. The great interest in regional cooperation and integration (RCI) arises from the belief that it could help integrating countries to attain robust and sustained economic growth and poverty reduction through an improvement of trade, an increase in production and consumption, and easier access to international capital markets. The benefits of regional integration are as follows: ability to attract direct investments and financial capital, achieve economies of scale and motivate domestic reform. The World Bank (2009)³⁵ frames the advantages conferred by regional cooperation in the context of boosting the supply capacities of the region through the provision of regional public goods and regional specialization. Regional cooperation and integration, however, demand from members a commitment to cooperate in trade facilitation, domestic regulations and policies, regional infrastructure, and behind-the-border issues, including promotion of security, property rights

40. An example often given to illustrate the benefits of market-driven regional integration is the shift to machinery trade adopted as an efficient production strategy by Japanese firms. It is no longer a question of producing the entire machine in a given country but locating production of different parts of the machine in different countries across a region or even across the globe, which form parts of a production network. A report by the Japan International Cooperation Agency (2006)³⁶ says that in East Asia trade in machinery, including electric, communications and transport machines, along with parts and components, accounts for a significant share of total trade. In East Asia, Japanese firms have established regional production and logistical network around machinery-related industry. The countries hosting the production and logistical units for the machinery industry form an “integrated production space” linked by efficient trade, communication, transport and logistics infrastructure.

41. The JICA report further notes that advances in economic integration introduce low intra-regional tariffs, harmonize and standardize custom formalities and product standards, and build common institutional and physical platforms in the region to lower the costs of services in the region (“service link costs”) and facilitate business operations. This phenomenon is now emerging in certain industries such as the automotive industry in the rapidly developing region of the ASEAN where member countries perform as part of a regional supply or production chain. Production of automobiles and automotive parts is distributed across an integrated economic or production space composed of several countries instead of just being confined to Japan, e.g., automotive engines produced in Thailand, automotive transmission and wiring harness produced in the Philippines, etc.

42. Thus, this is the phenomenon of an efficient supply chain management that distributes different stages of the production process across several individual but integrated production platforms located in various countries. Arnold (2007)³⁷ pointed out the transformation from integrated manufacturing activities producing specific products for local markets to global production of product components with subsequent assembly, customization, and packaging arranged for specific national and metropolitan markets. Wignaraja, Francois and Rana (2009)³⁸ call this the “regionalization of global production networks.”

³⁵ World Bank. 2009. World Development Report. Washington DC: World Bank.

³⁶ Japan International Cooperation Agency (2006), “A report from the study group on assistance to the Southeast Asian Region- regional integration and development aid- general issues,” unpublished report, March 2006.

³⁷ Arnold, John. 2007. The Role of Trade Facilitation in Export Growth. In World Bank’s “South Asia: Growth and Regional Integration”. Chapter 8.

³⁸ Francois, Joseph F. & Wignaraja, Ganeshan, & Rana, Pradumna Bickram (Editors). 2009. Pan-Asian integration: linking East and South Asia. Palgrave Macmillan, Houndmills, Basingstoke ; New York. Page 2.

43. From this perspective, regional integration can support regional production networks, which maximize production-cost advantages that come with increasing returns to scale. This enables small countries of the region to specialize in niche products in regional supplier networks³⁹.

44. A small domestic market constrains the level of production and consumption because of limited opportunities for plant expansion and new investments. Regional integration expands domestic markets to include those of all the integrating countries into a larger regional market. A larger regional market not only implies a larger consumer base but also the presence of a diverse number of producers clustered around certain products. The diversity of economic activities and the availability of a larger pool of managerial and technical skill and expertise create large potential for more production and consumption. This is very attractive to investors because they now have a motivation to invest in plant expansion or to build newer and bigger plants. Economies of scale bring about a decrease in cost of production per unit of output and an increase in profitability.

45. This is to say that investors who previously have skipped a particular country because of the small size of the domestic market would now see that same market that has been integrated with other markets in the region differently this time. The potential of a large regional market encourages expansion in production capacity in anticipation of larger consumption. The region exploiting economies of scale and scope could be a production base for goods and services needed elsewhere, that is, there is created significant opportunities for export growth and export diversification.

46. In this sense, regional cooperation and integration (RCI) enlarges the market or economic space of cooperating countries and creates room for export diversification and export growth. Hesse (2007)⁴⁰ using a framework developed by Hausmann, Hwang, and Rodrik (2007)⁴¹, and Hausmann and Klinger (2006)⁴² explains that economic growth is not driven by comparative advantage but by countries' diversification of their investments into new activities. This will require investments to develop export capacities and export diversification that lead to upgrading of the value of export products and that enable the countries to improve the level of product sophistication in the product space. The pathway for higher economic growth is to move to the denser part of the product space where high value products are produced. This process could be facilitated by regional cooperation and integration.

47. The coordination of all activities across the region, which is now a single economic or production space, requires coordination and collaboration among governments and the business sector in the region. For example, very stringent rules of origin, expressed through a preferential treatment given to products of domestically owned companies, may reduce the availability of goods that would otherwise have been accessible to the larger consumer base in the integrating region. In particular, trade facilitation to remove non-tariff barriers to intra-regional trade, the availability of ample supplies of power to growing industries through regional energy trade and physical connectivity through efficient transport corridors would be critical in coordinating production and trade in that economic or production space.

³⁹ World Bank. 2009. World Development Report 2009: Reshaping Economic Geography.

⁴⁰ Hesse, Heiko. 2007. Export Diversification and Economic Growth. Commission on Growth and Development Workshop on Global Trends and Challenges, Yale University, September 2007.

⁴¹ Hausmann, R., J. Hwang and D. Rodrik, 2007, "What you export matters," *Journal of Economic Growth*, 12 (1): 1-25.

⁴² Hausmann, R. and B. Klinger (2006) 'Structural Transformation and Patterns of Comparative Advantage in the Product Space,' Center for International Development, Harvard University, Working Paper No. 128.

48. A key question is whether regional trade integration will bring about greater trade creation than trade diversion. An intuition is that regional cooperation and integration provide member countries with an expanded and more diversified market where economies of scale may be exploited, which could motivate economic growth and poverty reduction. This intuition is linked to the seminal idea that freer trade leads to higher growth (Krueger, 1999⁴³; Helpman and Krugman, 1985⁴⁴). An empirical study by Rodríguez-Delgado (2007)⁴⁵ found that the formation of the SAFTA would generate higher trade flows in the region.

49. In sum, regional integration can support growth in South Asia through several channels: agglomeration benefits, increased investments as a result of expanded markets and scale economies, flow of information and technology, and knowledge spillover, increased foreign direct investments (Ahmed and Ghani, 2007)⁴⁶.

What do current studies say about the benefits of regional cooperation integration?

Economic growth

50. Ahmed and Ghani (2008)⁴⁷ noted that South Asia has the potential to accelerate growth and reduce poverty by exploiting four underutilized spatial features of the region: geography, transportation, factor mobility, and scale economies.

51. First, South Asia is densely populated, with a significant proportion of the population living close to the borders between countries. After Europe, South Asia has the largest concentration of people living close to the border. It has the maximum “city pairs” within 50 kilometers with a population of more than 25,000 people. Almost all the South Asian countries share a common border with the largest regional partner (India). Regional integration initiatives will unlock the growth benefit of geography and support income convergence across regions and countries. Regional trade is more sensitive to transport costs, scale economies, and factor mobility than global trade.

52. South Asia suffers from high trade and transportation costs compared with other regions because of border restrictions and poor transport. The cost of trading across borders is nearly double for India and Bangladesh compared with China. It is more than three times higher for Afghanistan, Bhutan, and Nepal. The quality of transport infrastructure in South Asia, especially the highway networks, is poor. Truck operating speeds are low, delays at state and provincial check posts are frequent and can be long, and delivery times are consequently subject to significant variation. The regions away from the main trade corridors have the poorest infrastructure and face the greatest constraints. Raising the level of the infrastructure and reducing regulatory barriers to trade, whether international or national, will help integrate the lagging regions into both the national and global economies, reducing the relative advantages of the coastal states.

⁴³ Krueger, Anne (1997), “Trade Policy and Economic Development: How We Learn,” *American Economic Review* 87 (1), 1-22.

⁴⁴ Helpman, Elhanan, and Paul R. Krugman (1985), *Market Structure and Foreign Trade. Increasing Returns, Imperfect Competition, and the International Economy*, Cambridge, MA: MIT Press.

⁴⁵ Rodríguez-Delgado, J. D. 2007. “SAFTA: Living in a World of Regional Trade Agreements.” IMF Working Paper, 07/23, International Monetary Fund, Washington, DC.

⁴⁶ Ahmed, Sadiq and Ghani, Ejaz. 2007. *South Asia: Growth and Regional Integration*, Macmillan.

⁴⁷ Ahmed, Sadiq and Ghani, Ejaz. 2008. *Making Regional Cooperation Work for South Asia’s Poor*

53. Third, factor mobility, and in particular migration rate, is low in South Asia. Only 2 million people migrate every year in India from rural to urban areas, compared with nearly 20 million people in China. Increased agricultural productivity could reallocate labor and capital from low-value activities (agriculture) to high-value activities (manufacturing and services sectors) and support growth.

54. Fourth, South Asian firms are disproportionately small. They are unable to reap the benefits of scale economies because of labor and regulatory restrictions that prevent them from growing. The policy changes aimed at taking advantage of the interactions between geography, transportation, factor mobility, and scale economies not only will lift growth in the lagging regions but also will support higher growth rates at the country level and in South Asia.

55. Notwithstanding these still untapped features, it is also noted that South Asia has become much more open over the years and has integrated globally.

56. The current global financial crisis however, may have slowed down the recent high economic growth in the region. The slowdown in regional GDP growth from a peak of 8.9 percent in 2007 to 6.3 percent in 2009—was the least pronounced of that for all developing regions⁴⁸. Dasgupta (2010)⁴⁹ noted that South Asia's particular strengths and forms of global integration—not the lack of it—was a key reason that allowed greater resilience. Over the past 15 years the region has become much more open—and the form of openness it has chosen has provided resilience in the face of recent shocks, to wit:

- Financial systems proved relatively robust, with limited financial integration and exposures to overseas subprime markets, while long-standing capital account restrictions lessened, but not altogether avoided, vulnerability to sudden capital outflows
- Remittance inflows proved surprisingly resilient, as opposed to trends elsewhere, as workers from South Asia kept remitting earnings and savings from abroad even as they faced job losses and downturns in main migration centers
- Exports proved relatively resilient, especially given the types of specialization such as in the IT services sector (India), and in the garment and textile sectors (Bangladesh and Sri Lanka) where the region maintained competitiveness
- Foreign direct investment flows proved more buoyant and resilient than in other parts of the world.

57. As a result, South Asia weathered the global shocks much better than expected. This argument says that South Asia has attained a certain degree of global integration but would deepening regional cooperation and integration lead to higher growth and economic resiliency?

58. Ahmed (2008)⁵⁰ indicated that the growth benefits of market integration are likely to be large but unequal. Take India for example. It is a relatively large country, with a big home market and can get by with more restrictive borders, since the size of its economy and population provides the incentive to importers and exporters to overcome these barriers. It is the small, land locked countries like Afghanistan, Bhutan, and Nepal, which will benefit most from improved access to the markets of other countries in the region. These relatively smaller countries tend to depend more on openness to overcome the disadvantage of size: small

⁴⁸ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁴⁹ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁵⁰ Ahmed. Sadiq. 2008. Can Regional Cooperation End Poverty in South Asia? World Bank.

population, small markets, and inability to take advantage of agglomeration and scale economies. Even within India, the peculiar geography that isolates the seven North-Eastern states from mainland India with the location of Bangladesh in-between suggests that market integration requires trade and transit arrangements with neighbors to benefit all regions that are lagging and isolated from the growth centers

Increasing welfare gains

59. Kumar (2007) ⁵¹reported that a number of studies conducted independently of each other have reported the substantial potential of regional cooperation in increasing the welfare gains for the Asian region (Table 3). These are as follows:

Table 1-3. Welfare Gains from Economic Integration in Asia. 2007.

Study	Scope of Economic Integration	Estimated welfare gains for the scenario of deepest integration	Remarks
RIS [Mohanty et al, 2003]	JACIK	US\$ 210 billion	Every country benefits; potential for rest of the world also gaining
ADB [Brooks et al 2005]	Developing Asia	much larger gains than multilateral trade liberalization	Smaller countries can share the dynamism of China and India
ADB [Kawai & Wignarajah 2007]	ASEAN+6 (EAS members)	US \$ 284 billion	Every country benefits
RIS [Mohanty & Pohit 2007]	ASEAN+6 (EAS members)	US\$ 178 billion	Welfare gains vary between 1.5% of GDP (Singapore) to 4.7% (Indonesia) much higher gains for poorer countries as a % of GDP

Source: Towards Broader Regional Cooperation In Asia. UNDP.

60. Kumar also highlighted that one of the studies, in particular the ADB study⁵², generated projections of income and trade to 2025 under different scenarios to examine the relative impact of regional integration vis-à-vis global trade liberalization. The findings of the ADB study suggest that:

- regional trade and integration could offer Asia great potential for rapid and sustained growth.
- much of Asia's gains from global trade liberalization could be realized by a regional initiative alone.
- the combined gains from removing tariff and structural barriers to Asian trade far outweigh those from global tariff abolition.

⁵¹ Kumar, Nagesh. 2007. Towards Broader Regional Cooperation In Asia. UNDP. December 2007

⁵² Brooks, Douglas, David Roland-Holst and Fan Zhai (2005). Growth, Trade and Integration: Long-term Scenarios of Developing Asia. Manila: ADB.

- greater regional integration would propagate commercial linkages and transfer the stimulus of Asia's rapid-growth economies, particularly China and India, to their lower income neighbors.

Lowering income inequality

61. Despite the strong growth and poverty reduction recently recorded in South Asia, two negative developments have emerged: (a) income inequality, and (b) the growing income imbalance in regions within countries and among the South Asian countries leading to the lagging regions problem (Ahmed, 2010)⁵³.

62. Several lagging regions in South Asia are border economies (e.g. North-east India, North-west Pakistan, Northern Bangladesh, and parts of Nepal and Afghanistan). These lagging regions suffer from the disabilities typically associated with landlocked countries or geographical isolation i.e. poor connectivity with the markets within the country and with the neighboring countries (World Bank 2010)⁵⁴.

63. Regional cooperation, together with national initiatives, can be a powerful tool for reducing the gap between the leading and lagging regions and ensure that no country or region is left behind.

Improved cross-border physical connectivity

64. Since the development of infrastructure systems has taken place mostly in a national context, there has been little consideration given to cross-border issues of compatibility, uniformity of standards, infrastructure and equipment design, among other issues. Cross-border infrastructure projects (e.g., transport, energy, and telecommunications) are essential for the movement of goods, services, people, and information across countries. Such facilities, if designed well and operated efficiently, enlarge market access, reduce economic distance and facilitate trade, investment, and labor flows. The resulting intensification of cross-border economic activities can create employment, particularly in the labor-intensive sectors of DMCs, thus contributing to poverty reduction (ADB. 2007)⁵⁵.

65. Jacques (2004)⁵⁶ observed that despite the inheritance of a centuries-old integrated transport infrastructure, land transport networks in South Asia are fragmented and have poor connectivity with the markets within the country as well as with the neighboring countries. This impacts on the economic competitiveness of the country and impedes intra- as well as inter-regional trade. Transport bottlenecks also inhibit foreign direct investment.

66. However, regional cooperation on transport and trade facilitation can transform these landlocked regions into "land-linked" regions. The economic development of Bhutan, Nepal and north-east India could be transformed by ending their landlocked status.

⁵³ Ahmed, Sadiq. 2010. "Trade and Regional Cooperation for Growth and Poverty Reduction in South Asia," a presentation to Presentation to the IGC Trade Program, School of International and Public Affairs, Columbia University, New York, March 25.

⁵⁴ World Bank. 2010. Fact Sheet - South Asia: Growth and Regional Integration. URL: <http://go.worldbank.org/GB4WOFWOR0>

⁵⁵ ADB. 2007. Review of ADB's Long-Term Strategic Framework. A Note to Support Stakeholder Consultations. Appendix 6. Regional Cooperation and Integration.

⁵⁶ Jacques, Isabelle. South Asia: What are the benefits of regional economic cooperation? 11 – 12 October 2004.

Trade effects

67. Regional cooperation will reduce trade and transport barriers, thereby promoting trade, facilitating mobility of factors, and supporting agglomeration economies, and lead to higher growth. By reducing trade and transport barriers, lagging areas within the region may be able to catch up with the more progressive areas.

68. South Asia has one of the lowest levels of intra-regional trade anywhere in the world, due primarily to prevailing trade barriers. Similar to the experience in the EU, East Asia and other regional trading arrangements, the potential for closer integration within South Asia is huge. A larger regional market will allow bigger scale economies, induce greater competition and technology spillovers, improve trade logistics and attract greater private investment from East Asia and the rest of the world. Dasgupta (2010)⁵⁷ noted that there are already prominent gains happening on the ground: Sri-Lanka-India trade has boomed following the bilateral trade agreements, extending to services, such as open-skies agreement that has brought new carriers and tourism, while Sri Lanka's exports to India have quadrupled; Nepal's access to India's labor markets has increased remittances dramatically; Bhutan's power projects are providing a surge in export earnings and growth, while helping supply critical power; the recent 2010 Bangladesh-India trade agreement promises to open similar avenues to growth, not just to the two countries, but also to boost transit trade for land-locked Nepal and Bhutan and India's Northeast, and; Afghanistan-Pakistan border trade is booming with large benefits to both countries.

69. Since regional cooperation and integration means having an outward-orientation or openness to trade in contrast to the insular, own-country perspective, the findings reported by D. Das (2007) and R. Das (2009) serve as a good starting point for understanding the benefits of regional orientation and integration. D. Das (2007)⁵⁸ indicates that results of numerous cross-country and panel regressions showed "outwardness" or "outer-orientation" or "openness" being strongly linked to faster economic growth. This relationship holds regardless of whether openness is measured in terms of a country's trade policies, that is, by the level of tariff and non-tariff barriers, or as a policy outcome, that is, the ratio of trade (exports plus imports) to GDP. R. Das (2009)⁵⁹ noted that numerous estimates of the gravity model generally support the contention that regional trading arrangements (RTAs) create trade⁶⁰.

70. On the other hand, there are significant costs in missing the opportunities for regional cooperation and integration. Various independent estimates seem to cluster around the Figure US\$40 billion representing trade benefits arising from regional integration. The underutilized trade potential is seen to benefit more the smaller and less developed economies of the region. The estimated potential intra-SAARC trade in 2006 was nearly US\$40 billion compared to the existing formal trade of around US\$10.5 billion out of which nearly 74% remained unrealized (Chibber, 2009)⁶¹. Ramatullah (2010)⁶² notes that intra-regional trade among SAARC member states has been only around US\$10.48 billion in 2006, or around 5% of total trade, compared to

⁵⁷ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁵⁸ Das, Dilip K. 2007. The Evolving Global Trade Architecture. Edward Elgar Publishing, Inc. Northampton, MA, USA

⁵⁹ Das, Ram Upendra. 2009. Regional Economic Integration in South Asia-Prospects and Challenges. RIS Discussion Paper # 157. Research and Information System for Developing Countries.

⁶⁰ Das (2009) acknowledges the possibility of trade diversion. He argues that what is important is the net effect of trade creation and trade diversion. So far, it seems that no empirical estimate of the net effect has been undertaken.

⁶¹ Chibber Ajay (2009), "Global Financial Tsunami: Crisis or an opportunity for Asia Pacific", by UNDP

⁶² Rahmatullah. 2010. Presentation for CPD Dhaka 4 March 2010.

45% in East Asia and 26% in ASEAN. He believes that with greater stability in the political environment and improvement and integration of the transport networks, potential trade could be as much as US\$40 billion.

71. A study by Hirantha (2004)⁶³ reports strong evidence of trade creation in the South Asian region under SAPTA and with no trade diversion on trade with nonmembers. Batra (2004)⁶⁴ finds a positive trade potential in the SAARC as a whole, but mainly from increased trade between India and Pakistan, estimated at US\$6.5 billion more than the actual trade between these two countries. On the other hand, there has been little empirical work on economic integration's two effects, trade creation and trade diversion. Rana and Dowling commenting on the importance of conducting an empirical study of the trade creation and diversion effects, stressed that it is important to evaluate the costs and benefits not only to the trading country but also to its partners within South Asia.

72. Kumar and Singh (2009)⁶⁵ enumerate the empirical studies on the benefits from regional integration. Reporting the positive side, are the following:

- T.N. Srinivasan (1994)⁶⁶ using a gravity model showed that a Free Trade Agreement in South Asia would lead to an increase in trade of 8.9 times in Bangladesh, 9.5 in Pakistan, 12.8 in India, 10.3 in Sri Lanka, and 17.2 in Nepal. Simulations showed that removal of all tariffs would increase total trade to 3% of GDP for India, and 59% of GDP for Nepal, and something in between for the other countries.
- Kabir (2001)⁶⁷ using a gravity model found that SAARC member countries should liberalize trade to achieve trade-creating benefits.
- Pitigala (2005)⁶⁸ demonstrated that the trade structure of South Asian countries might not facilitate a rapid increase in intraregional trade. He suggested the continuation of unilateral liberalization in parallel with regional integration to help South Asian countries diversify their narrow export bases and evolve new comparative advantages and complementarities that could facilitate the successful implementation of SAFTA.
- Rahman (2005)⁶⁹ argued that there is scope for mutual trade expansion between Bangladesh and India.
- UNCTAD and ADB (2008)⁷⁰ using a general equilibrium analysis to estimate the impact of SAFTA on the members concluded that it will be trade creating. With India serving as growth pole, all participating countries will gain. Gains will be greater for smaller countries in the region.

⁶³ Hirantha, Seekkuwa Wasam. 2004. From SAPTA to SAFTA: Gravity Analysis of South Asian Free Trade.

⁶⁴ Batra, Amita. 2004. India's Global Trade Potential: The Gravity Model Approach . In *Global Economic Review: Perspectives on East Asian Economies and Industries*, 1744-3873, Volume 35, Issue 3, 2006, Pages 327 – 361.

⁶⁵ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32.

⁶⁶ Srinivasan, T.N. 1994. Regional Trading Arrangements and Beyond: Exploring Some Options for South Asia-Theory, Empirics and Policy, Report No. IDB-142, South-Asia Region. Washington, DC: World Bank.

⁶⁷ Kabir Hassan, M. 2001. Is SAARC a viable economic block? Evidence from gravity model. *Journal of Asian Economics*. 12 (2). pp.263-290.

⁶⁸ Pitigala, N. 2005. What Does Regional Trade in South Asia Reveal about Future Trade Integration? Some Empirical Evidence. World Bank Policy Research Working Paper 3497.

⁶⁹ Rahman, M.M. 2005. Bangladesh-India Bilateral Trade: Causes of Imbalance and Measures for Improvement. Mimeo, www.etsg.org/ETSG2005/papers/rahman.pdf

⁷⁰ United Nations Conference on Trade and Development (UNCTAD) and ADB. 2008. Quantification of Benefits from Regional Cooperation in South Asia. Geneva: UNCTAD.

- Jayasuriya and Weekrakoon (2002)⁷¹ examined the trade-investment links within the region, focusing on the textile and garment sectors and studying firm-level data from Sri Lanka. They concluded that trade-investment links were still rather limited but there was potential to attract foreign direct investments by lowering tariffs following SAFTA.

73. On the less optimistic side, are the following findings:

- Bandara and Yu (2003)⁷² used the Global Trade Analysis Project (GTAP) computable general equilibrium (CGE) model to analyze the impact of SAFTA on the countries in South Asia and perform simulations using two policy scenarios: unilateral liberalization and preferential liberalization. They found that unilateral liberalization will benefit more the South Asian countries but this rests on the assumption that India and Pakistan cannot settle their political conflict and thus, no meaningful integration will happen. They think that it is much better for countries in the region to liberalize own trade regimes rather than pin their hope on SAFTA that is weighed down with economic and political constraints.
- Panagariya (2003)⁷³ maintained that beneficial trade creation effects would be overwhelmed by trade diversion.
- Krueger and others (2004)⁷⁴ recognized the potential gains from SAFTA but the region does not meet most of the criteria (theory-based) for successful trade agreements.
- According to Panagariya and Krueger, countries in the region will benefit more from unilateral and bilateral liberalization.
- Kumar and Saini (2007)⁷⁵ using standard static GTAP model found weak welfare gains from establishing SAFTA or from deeper trade policy coordination in South Asia.

74. Different studies showed mixed results and did not unambiguously show that regional integration would bring unmitigated gains. Kumar and Singh (2009)⁷⁶ gave as reasons the following: gravity models can take into account non-economic factors and thus, they tend to yield higher estimates of welfare gains than typical CGE models and the high level of data aggregation gloss over important details. India and Pakistan are often characterized as competing textile and handicraft exporting economies with limited complementarities. This was dispelled by more disaggregated data (six digit level) showed that there were only four overlapping items between India and Pakistan in their top ten exports (Kumar and Singh, 2009)⁷⁷.

75. On balance, it seems that the estimation of the gains from regional integration tends to be underestimated. Data on formal trade within the region and trade flows are underestimated

⁷¹ Jayasuriya, S. and D. Weekrakoon. 2002. Foreign Direct Investment and Economic Integration in the SAARC Region. In T. N. Srinivasan, ed. Trade, Finance and Investment in South Asia. New Delhi: Social Sciences Press.

⁷² Bandara, J.S. and W. Yu. 2003. How Desirable is the South Asian Free Trade Area? A Quantitative Assessment. *The World Economy*. 26 (9). pp. 1293-1323.

⁷³ Panagariya, A. 2003. South Asia: Does Preferential Trade Liberalization Make Sense? *The World Economy*. vol. 26 (9).

⁷⁴ Krueger, E., R. Pinto, V. Thomas and T. To. 2004. Impacts of the South Asia Free Trade Agreement. Policy Analysis Workshop, Public Affairs 869. University of Wisconsin– Madison.

⁷⁵ Kumar, G.A and G.K Saini G.K. 2007. Economic Co-operation in South Asia: The Dilemma of SAFTA and Beyond. Indira Gandhi Institute of Development Research WP-2007-017.

⁷⁶ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32.

⁷⁷ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32.

due to very large informal trade (Kumar and Singh, 2009 citing Taneja and Sawhney, 2007)⁷⁸ implying that regional trade integration will result into a large net welfare impact. In addition to this, inclusion of non-economic gains from regional integration such as political and security gains, has also not been considered in empirical studies.

76. A larger South Asian integration could also provide an important platform to reduce real trade costs and behind-the-border barriers in the region. This would in turn, attract greater investments and integration with adjacent regions like East Asia, thereby enlarging further the potential gains⁷⁹. Accordingly, Kumar (2009)⁸⁰ noted that a more closely integrated South Asian market would improve the scale economies of domestic firms; increase competition, and hence efficiency; and facilitate skills and technology spillovers (e.g. IT and business process outsourcing sector). Industrial structures that are similar across the region (for example, apparel and textiles) would also gain from greater specialization and intra-industry trade, helping to strengthen comparative advantages with the rest of the world. Services, too, would gain, such as tourism, transport, energy, and shipping, with scale economies and competition. Such a bigger regional market would, in turn, attract greater trade and investment from the rest of the world and thus, higher gains.

77. The potential for such bigger regional market is large—the current levels could quadruple provided there are supportive policies⁸¹. This potential can be best expedited thru expanding bilateral trade and investment relations. Aggarwal and Mukherji (2005)⁸² explained that bilateral agreements work better and faster because there are less restrictive rules of origin, bigger and faster cuts in tariff and nontariff barriers, and features such as asymmetrical concessions (especially by larger countries to smaller ones) in the political-economy setting of the region. Consequently, as the subsequent trade and business climate improves in the wake of such bilateral trade, so do cross-border investments.

78. Dasgupta observed that such bilateral trade and cross-border investment is starting to show greater vitality in South Asia. Some of these bilateral arrangements and potentials are described in **Box 1-1**⁸³.

⁷⁸ Taneja, N. and A. Sawhney. 2007. Revitalising SAARC Trade: India's Role at 2007 Summit. Economic and Political Weekly. XLII (13). pp. 1081-1084.

⁷⁹ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁸⁰ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32.

⁸¹ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁸² Aggarwal, Vinod, and Rahul Mukherji. 2005. The Emerging Institutional Architecture of Trade in South Asia, Conference Paper —Asia's New Institutional Architecture: Managing Trade and Security Relations in A Post 9/11 World,|| Berkeley APEC Study Center, University of California at Berkeley, California.

⁸³ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

Box 1-1. South Asian Bilateral Cooperation

India–Sri Lanka Free Trade Agreement (ISLFTA)

Sri Lanka's regional trade, particularly with India, has undergone a significant increase compared to others. Sri Lanka's share of intraregional imports rose from 11 percent in 2000 to 23 percent in 2008, while its export share rose proportionately faster from a very low 2.7 percent in 2000 to 8.5 percent in 2008 (Pitigala 2010). Traditionally, Sri Lanka's exports to India have been relatively small, but since ISLFTA, Sri Lanka's bilateral exports have soared compared to the other non-landlocked countries, and relative to growth levels of Indian overall imports.

The reasons behind the success are (1) the ISLFTA, although principally an agreement in trade in goods, provided a boost to services trade and FDI—in air travel (the —open skies agreement brought in several new carriers), in transshipment (70% from India), and in FDI (India joined the top five investors, with cumulative investment of US\$2.5 billion); (2) the scope of product coverage was enhanced through a —negative list approach; (3) a faster pace of implementation was used—for example, duty-free access was granted by India within three years of signing on 81 percent of the agreed items, and similar reciprocity was pursued by Sri Lanka; and (4) rules of origin were simplified.

Bangladesh-India Cooperation

Bangladesh and India have a long history of agreements to facilitate trade and economic cooperation. Although bilateral trade between the two countries has been growing steadily, exports from India far outweigh imports from Bangladesh, resulting in a wide and growing trade gap. Bangladesh and India signed a series of new agreements in January 2010 to address some of the barriers to bilateral trade through new trade and transit provisions:

- Greater market access for Bangladesh. India has extended duty-free access beyond its South Asian FTA commitments, broadening the scope of goods to benefit from duty-free access to India, with the aim of narrowing the large trade gap.
- Promotion of transit links between Bangladesh and India. India also agreed on transit rights for goods from India's northeastern state of Tripura to Chittagong, including a new rail link. The new links will benefit both countries by reducing transport costs for Indian exporters in the border regions and by gaining greater revenues for Bangladesh from transit and port fees.
- Regional trade facilitation. India also agreed to a long-pending request from Bangladesh to allow rail transit from Bangladesh to Nepal and Bhutan, thereby benefiting all three of India's regional trade partners as India expands its demand for underused port facilities and services, and as Bangladesh's, Bhutan's, and Nepal's landlocked regions gain greater market access for their exports.

Source: South Asia Economic Update 2010: Moving Up, Looking East.

Trade Complementarity

79. The World Bank (2004) has pointed to the limited complementarities among South Asian economies as a constraining factor to increasing intraregional trade. All countries in the region have comparative advantage in labor-intensive manufactured products and the benefits of trading these products among themselves are limited. However, revealed comparative advantage analysis using more disaggregated data on international trade in goods and services indicates that there may be scope for greater intraregional trade in South Asia (Rana and Dowling)⁸⁴.

80. A recent study (Kemal, Abbas and Qadir, 2000)⁸⁵ suggests that trade complementarities between India and Bangladesh, and between Sri Lanka and India have increased. This indicates that regional cooperation and integration will enable the expansion of trade among member countries. India has revealed comparative advantage in cereals, milling products, malts, starches, sugar and textiles, products that Pakistan need and import but not presently from India. The scope for greater intraregional trade extends to other products such as paper, machinery and transport equipment, pharmaceuticals and leather products.

81. In the case of South Asia, the region is characterized by complementarities in the demand and supply of resources such as technology and skilled manpower⁸⁶.

82. With respect to trade complementarity, regional economic integration can:

- help exploit the profound synergies that have developed between the economic structures of subregional economies.
- by generating intraregional demand, supplement external demand and reduce the vulnerability of the region owing to over-dependence on other regions.
- help in exploiting the existing capacities of the region fully⁸⁷.

83. Bilateral FTAs in South Asia are proof that trade is capturing complementarities between countries⁸⁸. A good example of this at the inter-regional level is the growing scarcity of labor in Japan and Republic of Korea which is complemented by labor abundance in South-East and South Asian countries.

84. In particular for South Asia, recent trade data indicates significant trade and service sector complementarities across the region⁸⁹. Mukherji (2002)⁹⁰ identified as many as 113 potentially tradable items within the SAARC region. These include tea and coffee, cotton and textiles, garments, rubber, light engineering goods, iron and steel, cement, edibles (dry fruits,

⁸⁴ Rana, Pradumna Bickram and Dowling, John Malcolm. 2009. South Asia: rising to the challenge of globalization

⁸⁵ Kemal, A. R. Kalbe Abbas, Musleh-ud Din, and Qadir, Usman. 2000. 'A Plan to Strengthen Regional Trade Cooperation in South Asia'. Kemal, A. R., Musleh-ud Din, Kalbe Abbas, and Usman Qadir. 2000. Paper presented to the Second Conference of the South Asia Network of Economic Research Institute (SANEI), August 28-29, Kathmandu. Also in T. N. Srinivasan (ed.), Trade Finance and Investment in South Asia, (New Delhi: Social Science Press) 2002.

⁸⁶ What will be the benefits of an Asian Economic Community? Potential of an Asian Economic Community. URL: http://www.newasiaforum.org/Potential_of_an_Asian_Economic_Community.htm

⁸⁷ Kumar, Nagesh. 2007. Towards Broader Regional Cooperation In Asia. UNDP. December 2007

⁸⁸ Shaheen Rafi Khan, Moeed Yousaf, Faisal Haq Shaheen, and Azka Tanveer. Regional trade agreements in South Asia: trade and conflict linkages. http://www.idrc.ca/en/ev-132669-201-1-DO_TOPIC.html#ch04

⁸⁹ Shaheen Rafi Khan, Moeed Yousaf, Faisal Haq Shaheen, and Azka Tanveer. Regional trade agreements in South Asia: trade and conflict linkages. http://www.idrc.ca/en/ev-132669-201-1-DO_TOPIC.html#ch04

⁹⁰ Mukherji, I.N. (2002) 'Charting a free trade area in South Asia: instruments and modalities', in T.N. Srinivasan (ed.) Trade, Finance and Investment in South Asia, New Delhi: Social Science Press, SANEI, pp. 79–108.

spices and vegetables), medical equipment, pharmaceuticals and agro-chemicals, among others.

- Pakistan could import from India pharmaceuticals, textile machinery, light engineering industry items, refrigerators, irons, air-conditioners, washing machines, televisions, sugar, cement, organic and inorganic chemicals, and paper and pulp, which it currently does from elsewhere at much higher cost. Accordingly, Pakistan could export to India cotton, surgical and sports goods, leather products and dry and fresh fruits.
- Sri Lanka, Bangladesh and India all export tea, while Pakistan imports it. India and Bangladesh export jute and jute products to the rest of the SAARC member countries. Pakistan and India produce cotton, which its neighbors require. Similarly, India and, to a lesser degree, Pakistan, export manufactured goods within the region.

Energy security and cooperation

85. Energy endowments differ among the South Asian countries. Bangladesh, India, Pakistan, and Sri Lanka have a demand for energy that is in excess of their domestic capacity. This gap will only become larger with future growth. Conversely, Bhutan and Nepal have resource endowments considerably in excess of domestic demand⁹¹.

86. Despite this complementarity, energy trading in the region is low. Only India, Bhutan, and Nepal currently engage in electricity trading thru bilateral hydro-energy trade agreements between India and Bhutan as well as India and Nepal. Bangladesh is endowed with natural gas reserves, but gas trade is constrained by the region's inadequate infrastructure and political misconceptions.

87. Regional cooperation can play an important role in addressing the problem of energy needs within the region as well as with neighboring countries in other regions. Pakistan and Afghanistan can play an important role as transit states for the rest of South Asia, as they provide the best route for access to Central Asia's energy⁹².

88. The benefits from energy trade in South Asia can be enormous: The most obvious direct benefit would be in alleviating the energy constraint to growth for the potential energy-importing countries, India and Pakistan. In addition, transit countries would earn large fees, and grids could improve efficiency of supply and could attract private investment with better services, while potentially improving the environment.

89. The tapping of this potential with regional energy links by some estimates could generate benefits valued at US\$12-15 billion annually⁹³. But this potential would only be realized with improved security and regional cooperation, including at the ground level and with discernible benefits to the local populations.

⁹¹ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

⁹² Jacques, Isabelle. South Asia: What are the benefits of regional economic cooperation? 11 – 12 October 2004.

⁹³ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

Climate change mitigation

90. Ahmed and Ghani (2008)⁹⁴ emphasized that major climate change problem areas include the melting of Himalayan glaciers, which can lead to reduced water availability in the South Asian rivers. Another is the frequency of floods in Bangladesh and Pakistan, the cyclones, coupled with rising sea level.

91. Isolated actions at the national level cannot provide sustainable solutions inasmuch as water flows from upstream countries of Afghanistan, China, parts of India, and Nepal to Bangladesh, most of India, and Pakistan. Finding sustainable solutions for flood control, irrigation, and river transport will require cooperation with these upstream countries.

92. On the other hand, cross-border cooperation on water among India, Bangladesh, and Nepal can guarantee long-term solution to flood mitigation.

Water cooperation

93. An estimated 400 million people, many of whom who are poor, directly or indirectly depend on the water flows of the three mighty rivers of Indus-Ganges-Brahmaputra for their livelihood⁹⁵. Frequent water shortages and intermittent floods create serious challenges to maintaining the income level of this large number of poor people.

94. Cooperation can potentially lead to numerous water-related benefits in the region. For example:

- strategic watershed management and storage of the Ganges tributaries in Nepal can potentially generate hydropower and irrigation water for Nepal as well as mitigate flood in India (Uttar Pradesh, Bihar) Bangladesh and Nepal; a multi-purpose water storage in north-east India can provide hydropower, control flooding and also provide reliable irrigation during dry season flows in certain parts of India and Bangladesh.
- The Indus Water Treaty between Pakistan and India has demonstrated that cooperation can exist despite political disputes.
- Afghanistan sits on the upper riparian of some five water basins that have huge potential for irrigation and hydropower benefits that could well transform Afghanistan's economy. Yet, little of the critical investment has been made thus far. As a result, Afghanistan is a severely water-constrained economy with a serious power shortage as well. A key constraint is a lack of a framework for water-sharing agreements with its neighbors.
- The Kabul River Water Basin Project is a high-priority project that could yield substantial hydropower and irrigation benefits for both Afghanistan and Pakistan. A key requirement for this project to move forward is a riparian agreement between Afghanistan and Pakistan which will result in a win-win situation for both countries.

⁹⁴ Ahmed, Sadiq and Ghani, Ejaz. 2008. Making Regional Cooperation Work for South Asia's Poor.

⁹⁵ Ahmed. Sadiq. 2008. Can Regional Cooperation End Poverty in South Asia? World Bank,

Conflict resolution, prevention and improving peace and security

95. A region can be defined on the basis of certain specific indicators that confirm its existence e.g. a set of countries in close geographical proximity with each other can be categorized as a 'region' when, first and foremost, they share a certain commonality of (national) interests. These interests could incorporate a whole gamut of social, economic, political, cultural, historical, and other factors. Moreover, these countries should be sufficiently engaged so as to understand the significance of placing cooperation above conflict in the conduct of inter-state relations. This should also be bolstered by a collective desire to come together on a common ground to create some lasting mechanism for regional cooperation (Bhatta⁹⁶).

96. However, the above mentioned conditions are more or less lacking among the South Asian countries. Such a lack of 'region-ness' in South Asia can also be understood in terms of the persistence of myriad of social, economic and political problems practically in each and every South Asian country. Such intra-state problems are often either the cause or consequence of inter-state disputes and misperceptions as well.

97. Brown (et.al)⁹⁷ observed that while the relationship between trade and conflict remains a complicated one trade can be a viable form of conflict prevention, although trade alone is not sufficient to hinder conflict. Still, peace is by no means an automatic outcome of increased regional integration and cooperation as this can minimize if not prevent internal conflicts from spilling over the national borders. Peace and stability can be promoted by increasing the interdependence of countries in the region. Other variables that contribute to creating an atmosphere of peace and stability include internal stability, strong institutions, like-minded governments, compatible market economies, well-defined borders and mutual interdependence.

98. Despite their differences and disagreements, India and Pakistan do still trade with each other, albeit at sub-optimal levels. Assuming a no conflict free trade agreement (FTA) scenario, potential bilateral trade flows would increase.

⁹⁶ Bhatta, Chandra regional integration and peace in South Asia-An Analysis.

⁹⁷ Brown, Oli, Qobo, Mzukisi, and Ruiz-Dana, Alejandra. 2008. The role of regional trade integration in conflict prevention. In Regional Trade Integration and Conflict Resolution. Edited by Shaheen Rafi Khan. IDRC.

IV. SLOW INTEGRATION, BINDING CONSTRAINTS, CONCLUDING REMARKS

99. Believing the efficacy of using a project-based approach to regional cooperation and integration, the High Level Forum (HLF) identified three activities that are expected to move the process forward: (a) transport corridors, (b) regional energy trade and (c) trade facilitation.

100. Taking off from this consensus of the HLF, the Chapter provided a practical analytical framework for identifying critical binding constraints to (i) transport corridors, (ii) regional energy trade and (iii) trade facilitation, which will help policymakers to formulate a sharper policy response to the issues at hand. The Chapter then pointed out the benefits of regional cooperation and integration and conversely, the costs of non-cooperation and the failure to integrate.

101. This final section looks at the reasons for the slow integration, which provides the setting and background for the constraints analysis exercise applied to the three activities/sectors identified by the High Level Forum in subsequent Chapters of this volume.

Why has integration been slow?

102. To say that regional cooperation and integration of South Asia is challenging, is to say the least in view of the difficult hurdles that bar this goal. As earlier mentioned, the concept of regional cooperation and integration has been out there for the past several decades but the pace of progress toward this goal has been slow. Some authors characterize the progress in economic integration in South Asia as “slow and halting” impeded by political conflicts and inward-looking policies (Scolly and Balaoing)⁹⁸. So why has regional cooperation and integration been slow relative to the emerging bilateral trade agreements, e.g., India-Sri Lanka Free Trade Agreement, India-Nepal Trade Treaty, which seem to be the preferred approach taken by South Asian countries?

103. Weerakon (2010)⁹⁹ offers some interesting insights. South Asian countries were open economies in the 1940s but had turned protectionist by the 1970. The wave of liberalization all over the globe saw Sri Lanka undertaking policy liberalization in the 1970s followed by other South Asian countries in the 1980s. The really serious effort at liberalization in the region was undertaken by India in the 1990s and by the end of the decade, enormous progress has been made in the region in this direction although there were left important policy barriers to trade and foreign investment¹⁰⁰. However, important divergences of interests among SAARC countries remain, which pose challenges to the SAARC process and the future pace of regional economic cooperation under SAFTA. The key element in this process is addressing the trade relationship between India and Pakistan, the biggest economies in the region, which ironically remain the least integrated in the SAARC region (Weerakon, 2010).

104. These two countries will need to enforce an expanded trade liberalization program. The relaxation of sensitive lists, e.g., most South Asian economies are restricting 55 to 65% of their imports from India under the SAFTA sensitive lists, will be an important step toward expanded

⁹⁸ Scolly, R. and Pelkmans-Balaoing, A. 2009. Current Patterns of Trade and Investment. In Pan-Asian Integration: Linking East and South Asia. Francois, Joseph, Rana, Pradumna and Wignaraja, Ganeshan., page 63.

⁹⁹ Weerakon, Dushni. 2010. SAFTA Current Status and Prospects. Chapter 3 in World Bank's "Promoting Economic Cooperation in South Asia" edited by Sadiq Ahmed, Saman Kelegama, Ejaz Ghani. 2010.

¹⁰⁰ Weerakon citing the World Bank (2004).

trade among countries in the region, according to Weerakon (2010)¹⁰¹. This echoes the view of Ahmed and Ghani (2007)¹⁰² that South Asian countries have maintained a higher level of protection within the region than with the rest of the world.

105. Restrictive policies within the region made it the least integrated region in the world where intraregional trade as a share of total trade is lowest for South Asia. Poor connectivity, cross-border conflicts, and concerns about regional security, high costs of trading across borders, little cross-border investments have been major reasons for the lack of integration of South Asia (Ahmed and Ghani, 2007¹⁰³; Srinivasan, 2010; Ghate, 2010). An example of poor connectivity is that only 7% of all international calls are regional compared to 71% for East Asia (Ahmed and Ghani, 2008)¹⁰⁴. Inefficient transport networks and cumbersome border procedures and processes have effectively checked the growth of intraregional trade by constraining the mobility of goods and factors of production.

106. Compared to other regions, intra-regional trade shares in South Asia are relatively low. Intra-regional trade shares in SAARC have risen from 3.8% to 6.7% in 1997 and 2007. In contrast, intra-regional shares in ASEAN were 23.7% in 1997 and 26.8% in 2007. For ASEAN + People's Republic of China, Japan and Korea, shares were 36.5% in 1997, which rose to 43.3% in 2007¹⁰⁵. The current situation of intraregional trade in South Asia is in stark contrast to the relatively high intraregional trade (19%) in 1948 soon after the countries got their independence from the British, but which declined to a mere 2% in 1967 (Kumar and Singh, 2009)¹⁰⁶.

107. The challenges faced by South Asian Countries in promoting intra-regional trade have been identified by Francois, Rana and Wignaraja (2009)¹⁰⁷ as: (a) lack of competitiveness of some sectors of manufacturing, (b) infrastructure bottlenecks, (c) residual bureaucratic impediments to private sector development, (d) macroeconomic imbalances, and (e) political tensions.

108. In addition to these factors, are policy-induced challenges such as a total lack of policy coordination, the sensitive lists in SAFTA and non-tariff barriers as well as structural factors such as trade facilitation, border infrastructure and constraints acting against services trade in the region that constrain South Asian integration (Das, 2010; Kumar, Das and De, 2008). Ghate (2010) opines that the most important of the constraining factors to regional cooperation and integration are political and security-related, and are internal to the region.

109. The structure of trade in South Asia has also been an important barrier to increasing intra-regional trade and economic integration. Due to their level of development, the bulk of output of developing countries in the region consists of unprocessed and semi-processed primary products, mostly labor-intensive commodities; a few export products by these same countries are mostly intended for countries outside the region- textiles and apparel and other

¹⁰¹ Weerakon, Dushni. 2010. SAFTA Current Status and Prospects. Chapter 3 in World Bank's "Promoting Economic Cooperation in South Asia" edited by Sadiq Ahmed, Saman Kelegama, Ejaz Ghani. 2010.

¹⁰² Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

¹⁰³ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

¹⁰⁴ Ahmed, Sadiq and Ghani, Ejaz. 2008. Making Regional Cooperation Work for South Asia's Poor. World Bank Policy Research Working Paper No. 4736.

¹⁰⁵ Source: Asia Regional Integration Center (ARIC) database, July 2008 as reported in Francois, Rana and Wignaraja, (2009).

¹⁰⁶ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32.

¹⁰⁷ Francois, Joseph F. & Wignaraja, Ganeshan, & Rana, Pradumna Bickram (Editors). 2009. Pan-Asian integration: linking East and South Asia. Palgrave Macmillan, Houndmills, Basingstoke ; New York.

light manufactured goods. Theory indicates that integration will be easier for countries that have complementarity in trade. Tussie (1987)¹⁰⁸ argues that regional integration is successful in developed countries in the late 1980s because of a high complementarity of demand, that is, a high demand for each other's country goods and services by partner countries. Those countries engage in intra-industry trade, that is, trade where each country is both an exporter and importer of the same broad range of products. Narlikar (2005)¹⁰⁹ explains that the nature of trade in the developed world is more conducive to integration than trade patterns in developing country regions where the limited trade that exists within regions of developing countries was usually inter-industry trade, rather than intra-industry trade.

Pathways to regional cooperation and integration

110. There is no doubt, however about the interest of South Asian countries to cooperate and integrate. A critical step being made is addressing behind-the-border issues also called "second generation reforms" such as reducing the cost of doing business, strengthening institutions, addressing inadequacy in infrastructure, addressing the weak knowledge economy, reforming regulatory frameworks and better governance. Ahmed (2006)¹¹⁰ observed that South Asian policymakers have begun to address the second-generation policy reforms. Apart from these second-generation reforms that will address respective problems that stand in the way of competitiveness, South Asian countries have taken steps through various mechanisms such as SAFTA and other activities seeking to address cross-border physical connectivity, expansion of regional trade investment and energy, promotion of regional financial intermediation and stability, and provision of regional public goods.

111. It is recognized that the pattern of trade (lack of complementarities) in the region, poorly developed infrastructure, high transaction costs and a host of other challenges that characterize the region may have led to the conclusion that regional cooperation and integration will yield only modest, if not at all, gains. In this regard, the insight from Kumar and Singh (2009)¹¹¹ is pertinent. They argue that deeper integration that encourages cross border investment by improving the business environment and reducing uncertainty is perhaps a necessary condition for successful regional integration. This requires greater investment in regional public goods and expansion of productive capacities among countries in the region. The regional public goods mentioned by Kumar and Singh could very well be the energy infrastructure that would address the energy deficit in the region and the transport corridors that will provide the vital connectivity for greater intraregional trade.

112. As recommended by the High Level Forum (HLF), one pathway for regional cooperation and integration is project-based cooperation in the region. The HLF process identified (a) transport corridors, (b) regional energy trade and (c) trade facilitation as windows of opportunity for regional cooperation and integration.

113. The HLF's consensus rests on an analytical arguments propounded in the literature (Sobhan, 2004; Ahmed and Ghani, 2007, among others).

¹⁰⁸ Tussie, Diana. 1987. *The Less Developed Countries and the World Trading System*. London: Frances Pinter.

¹⁰⁹ Amrita Narlikar. 2005. *The World Trade Organization: A Very Short Introduction*. Oxford: Oxford University Press.

¹¹⁰ Ahmed, Sadiq, 2006, *Explaining South Asia's Development Success: The Role of Good Policies*, Washington DC: World Bank.

¹¹¹ Kumar, Rajiv and Singh, Manjeeta. 2009. *India's Role in South Asia Trade and Investment Integration*. ADB Working Paper Series on Regional Economic Integration. No. 32.

114. Starting with integration of the infrastructure of the region contributes a fresh perspective on deepening cooperation and integration. Cooperation in energy trade and strengthening of transportation, transit and communication links across the region could be the long-awaited catalyst for regional cooperation and integration (Sobhan, 2004)¹¹².

115. Transport corridors and related infrastructure provide the critical physical connectivity for trade and factor mobility in the region without which the South Asian countries will continue to be more oriented toward extra-regional trading partners. Forming trade links within the region would require investments in an efficient transportation network. Transport corridors would lead to an integrated transport infrastructure, which permits uninterrupted travel from Peshawar to Chittagong and from Kathmandu to Colombo.

116. Ahmed and Ghani (2007)¹¹³ describe very well the critical energy situation faced by South Asian countries. The SAARC region (alternatively, South Asian region) is a net energy importer and fast growing demand for energy makes energy security a major concern. They call the electricity and gas shortage in the region as “persistent and recurring” (page 37), which without a resolute action on the part of policymakers will hamstring growth in the region. A major issue is the isolation from each other of gas and electricity networks in the region. Because of a number of reasons, including security concerns, there are no gas pipelines crossing national borders within SAARC or between SAARC and its neighbors. Limited electricity interconnections exist between India-Bhutan, India-Nepal, and Pakistan-Iran. Ironically, the region is blessed with substantial hydropower in Bhutan and Nepal, gas (Bangladesh) and coal resources in India that could be, but are not being exploited to meet the energy deficit. Energy cooperation could evolve into a common grid across the region with integrated electricity and gas systems that serve consumers and producers across the region.

117. Trade facilitation is necessary for regional cooperation and integration. Greater intra-regional trade will not be realized unless constraints to easier trade of goods and services are effectively addressed. It consists of the simplification of trade procedures and modernization of customs and other regulatory structures, improvements in transport and communications services, increased use of information technology to monitor product flows, and supply chain integration. The effort at trade facilitation comes at two levels: government efforts to improve policy and procedures, and private efforts to improve management and use of logistics services.

118. Since these have been identified as practical pathways to regional cooperation and integration, it is crucial to identify the binding constraints that deter these pathways from fulfilling their perceived role as mechanisms for regional cooperation and integration. A constraints analysis approach, which will motivate a sharper formulation of policy actions is deemed necessary in view of the limited and varying space for policy reforms faced by the political leadership in the South Asia region.

119. The component papers in this volume discuss their respective role in regional cooperation and integration and identify the binding constraints to those pathways. The last (paper) Chapter of this volume explores policy choices to address those binding constraints.

120. The orientation of air and maritime ports is toward the outside world and thus, increased efficiencies in air and maritime ports have a direct bearing on inter-regional trade. If we consider

¹¹² Sobhan, Rehman, SAFMA Regional Conference, August 2004. Dhaka.

http://www.southasianmedia.net/conference/Regional_Cooperation/roadmap.htm

¹¹³ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

intraregional trade or trade between countries within the region a priority area for reform is the streamlining of regulations and improvement of customs efficiency.

121. Some of the impediments to trade are policies that increase time for border crossing such as restrictive regulatory barriers, complex customs and transit procedures, lack of standardization, and security checks. An example is the tediousness of crossing between India and Bangladesh where queues often exceed 1,000 trucks on the Indian side. It will take 99 hours instead of 21 hours to make that crossing (Ahmed and Ghani, 2007)¹¹⁴.

¹¹⁴ Ahmed, Sadiq and Ghani, Ejaz. 2007. South Asia: Growth and Regional Integration, Macmillan.

CHAPTER 2

TRADE FACILITATION: EASING CONSTRAINTS TO INTRA-REGIONAL TRADE

I. Introduction

122. International trade in goods and services has become complex and highly competitive. First, continuous improvement and innovation in the product quality and services have pushed competition to an unprecedented level. Second, globalization and integration of markets have created tremendous challenges in improving competitiveness, increasing productivity, enhancing the formation of industrial clusters to take advantage of agglomeration economies, enhancing value chains, and seeking greater technological innovations. Third, there is an ever-expanding list of stricter regulations and sector- and product-specific clauses that are being added to global as well as regional trade agreements.

123. Trade facilitation, which eases constraints to the movement of tradable goods and services, can contribute to increasing intraregional regional trade. A greater volume of intra-regional trade provides a pathway for greater regional cooperation and integration. Trade facilitation is a key priority area identified by the High Level Forum to help break down intraregional trade barriers, thereby promoting regional cooperation and integration. In other words, greater intra-regional trade provides an anchor for deepening regional cooperation and integration in South Asian countries. However, barriers such as policy-induced constraints and structural factors seem to raise formidable obstacles to trade facilitation.

124. The objective of this chapter is to identify the binding constraints to trade facilitation, which can lead policymakers to formulate policy tools that can remove those constraints. This chapter is organized as follows:

Section I provides an overview of the structure and pattern of trade in the region to provide a background to the significance of trade facilitation. It also gives a brief summary of existing trade arrangements and recent trade reform initiatives in the South Asian region. The reader is directed to various studies on those trade arrangements and the status of trade reforms for details.

Section II discusses the role of trade facilitation in intra-regional trade and summarizes the benefits that trade facilitation confers in terms of increasing intra-regional trade and strengthening regional cooperation and integration.

Section III discusses the binding constraints to trade facilitation in the South Asian region. The final last section provides concluding remarks and some policy recommendations to address the identified binding constraints.

The Structure and Pattern of Trade in the Region and Trade Facilitation

125. Before the partition of colonial India there was a reasonably integrated economic region in the sub-continent. During the 19th century and early 20th century before World War II, South Asia was a well integrated region within the British empire (Rana and Dowling, 2009)¹¹⁵. Kumar and Singh (2009)¹¹⁶ observed that intraregional trade in South Asia, broadly from Kabul to Chittagong, was as high as 19% in 1948, soon after the countries achieved independence from the British. This steeply declined to a mere 2% in 1967 but still remains below 6% of South Asia's total trade with the world. The South Asian countries' trade orientation is now chiefly with the OECD countries, and lately with East Asia.

126. In terms of total trade, the value of trade for the whole South Asian region has been steadily increasing for the past 10 years. Figure 2-1 shows the growth of trade in goods from almost 200 billion dollars in 2003 to over 600 billion dollars in 2008. Although the exports are increasing, the bulk of the growth can be attributed to merchandise imports.

Figure 2-1. Total Trade South Asia. 1995-2000 (US\$ Billion)



Source: World Development Indicators, 2010.

127. South Asia's intra-regional trade as a percentage of its total trade volume has barely changed from around 2 percent in 1980 to 3 percent in 2004. This is very low compared to approximately 12 percent for East Asia. Overall intra-regional trade in South Asia constitutes about 1.2 percent of GDP while it contributes to 7 percent of GDP in East Asia¹¹⁷.

128. At the sub-regional level, merchandise trade to GDP ratios were also generally increasing or stable for the past five years with the exception of Afghanistan and Sri Lanka because of internal political conflicts in these two countries. With the end of the political strife in Sri Lanka, however, it is expected that there will be an increase in merchandise trade to GDP ratio in the country since next to Bhutan it is the most open country in the region. Given the

¹¹⁵ Rana, P. and M. Dowling, 2009, "Economic integration in South Asia and lessons from East Asia of trade and investment," Chapter 4 in J. Francois, P. Rana and G. Wignaraja (editors), *Pan-Asian Integration: Linking East and South Asia*, London: Palgrave Macmillan.

¹¹⁶ Kumar, Rajiv and Singh, Manjeeta. 2009. *India's Role in South Asia Trade and Investment Integration*. ADB Working Paper Series on Regional Economic Integration. No. 32. Page 1.

¹¹⁷ John Wilson and Tsunehiro Otsuki (2007), "Cutting trade costs and improved business facilitation in South Asia" Chapter 9 of Sadiq Ahmed and Ejaz Ghani, *South Asia: Growth and Regional Integration*, Washington, DC: The World Bank, reporting the findings of R. Newfarmer and M. Pierola, 2006. "SAFTA: promise and pitfalls of preferential trade agreements," Mimeo, Washington DC: The World Bank.

continuing conflict in Afghanistan, there is no foreseeable improvement in merchandise trade to GDP ratio in this country (Table 2-1).

Table 2-1. Merchandise Trade to GDP Ratio, South Asia

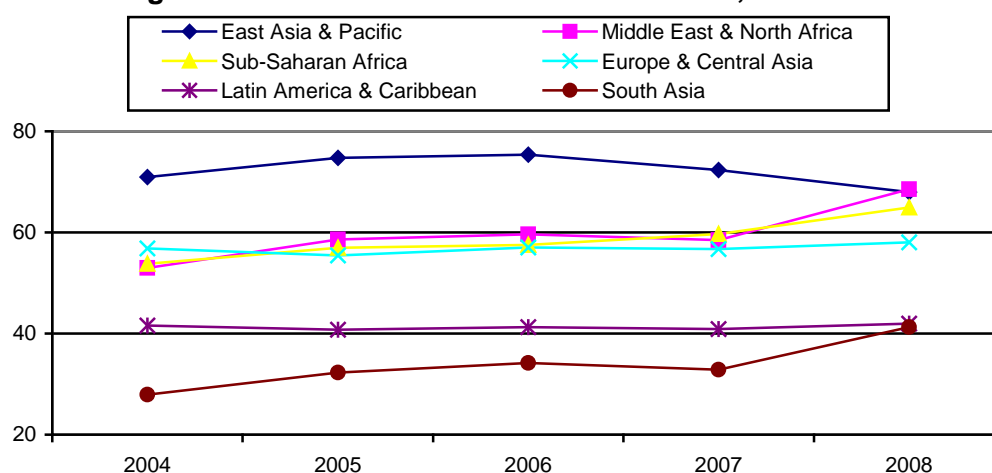
Country	2004	2005	2006	2007	2008
Afghanistan	43.51	41.89	36.61	32.66	37.93
Bangladesh	35.96	38.47	44.97	45.38	49.31
Bhutan	85.88	83.82	94.42	104.09	88.83
India	25.17	29.93	32.11	30.91	40.60
Maldives	105.97	120.90	124.04	125.49	136.59
Nepal	37.25	38.70	36.69	36.88	37.02
Pakistan	31.97	37.78	36.67	35.21	38.11
Sri Lanka	66.45	62.20	60.62	58.83	55.17

Source: World Development Indicators (2010)

129. An observation is that political conflicts wreak havoc not only on domestic economic activities but also on a country's international trade, which ultimately will have a negative impact on growth and development prospects.

130. Compared to other regions, however, South Asia lags behind the other regions of East Asia, Middle East and North Africa, Sub-Saharan Africa and Europe and Central Asia in terms of merchandise trade to GDP ratios, but seems to be catching up with Latin America and the Caribbean in 2008 (Figure 2-2).

Figure 2-2. Merchandise Trade-to-GDP Ratio, 2004-2008



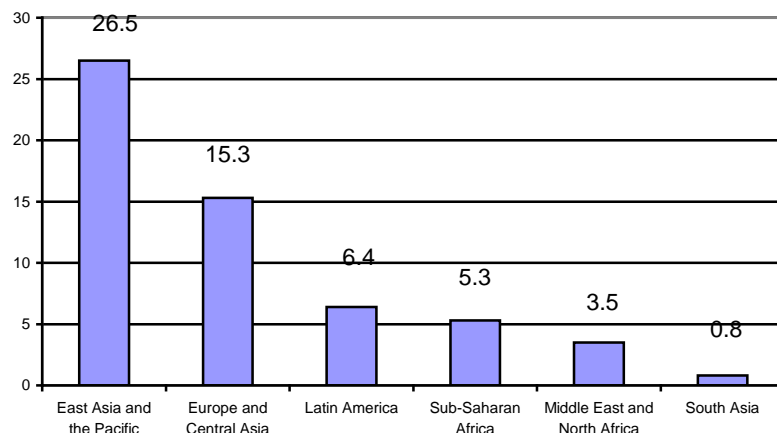
Source: World Development Indicators (2010)

131. However, while total trade was increasing, various observers have noted very low or limited intra-regional trade. South Asia intra-regional trade as a percentage of its total trade volume has changed slightly from around 2% in 1980 to about 6% in 2009. This is relatively low compared to the approximately 12% for East Asia in the same period. Overall intra-regional trade in South Asia constitutes around 1.2% of GDP while it contributes to 7% of the GDP in East Asia (Arnold, 2007)¹¹⁸.

¹¹⁸ Arnold, John. 2007. The Role of Trade Facilitation in Export Growth. In "South Asia: Growth and Regional Integration". Ahmed, Sadiq and Ghani, Ejaz. 2007. World Bank. Macmillan.

132. Figure 2-3 shows comparative figures on intra-regional trade as a share of GDP as computed by the World Bank (2005).

Figure 2-3. Intra-Regional Trade as a Share of Gross Domestic Product

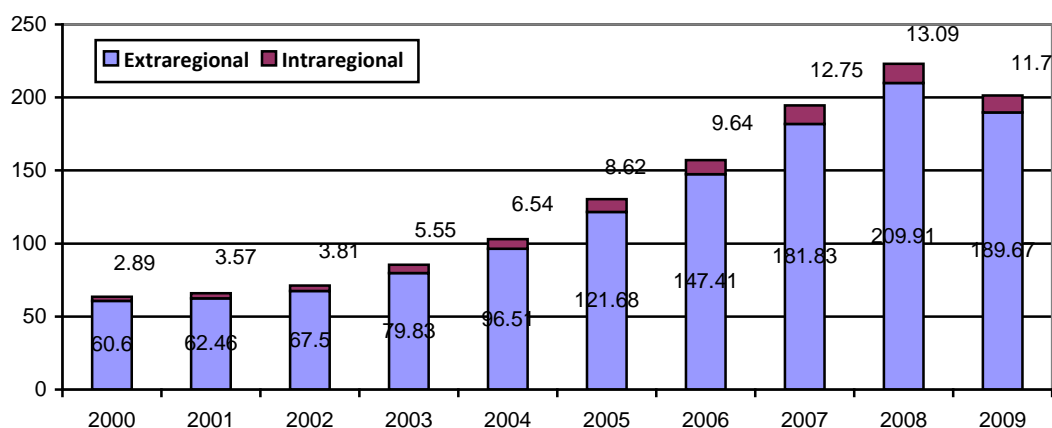


Source: Global Economic Prospects 2005, World Bank

133. Kumar and Singh (2009)¹¹⁹ reported that during 1996-2006, the volume of trade of countries in the region quadrupled from US\$2.214 billion to US\$9.778 billion and has been growing at a rate faster than the region's trade with the outside world. Intraregional trade rose from 4.2% in 1995 then stagnated at around 5% until 2005, and was around 5.5% thereafter¹²⁰.

134. The intra-regional and extra-regional export trade for the South Asian Region is summarized in Figure 2-4. (Details are in Annex 2-1)

Figure 2-4. South Asia Exports, 2000-2009, (US\$ Million)



Source: Direction of Trade Statistics (DOTS) Website, IMF. 2010.

¹¹⁹ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32. Page 1.

¹²⁰ Kumar and Singh (2009) used figures reported by Wijesinghe, S. "Economic and political utility of the SAARC Summit to Sri Lanka." *Daily News*, July 23, 2008.

135. The weak complementarity (or lack of it) of trade structures has often been mentioned as a reason for the rather slow growth of intra-regional trade in South Asia. However, it seems that this has changed over the years. Kumar and Singh (2009)¹²¹ reported that regional orientation has increased despite the fact that a reduction in trade costs and global trade liberalization has made distant markets more accessible. A higher regional orientation index in 2003-2004 computed by Kumar and Singh implied that imports were being sourced from the region itself. These are mostly resource-based or agricultural products, with a few manufacturing products also indicating higher regional orientation.

136. A strategy employed by South Asian countries to boost bilateral trade is to enter into preferential trade agreements with other countries. Preferential Trade Agreements (PTAs) are agreements among countries that involve preferential treatment of bilateral trade between any two parties to the agreement relative to their trade with the rest of the world. PTAs can be regional, bilateral or sub-regional, if there are more than two parties within the region.

137. The regional trade agreements in South Asia are summarized in Table 2-2 below (Some details are provided in Annex 2-2).

Table 2-2: Preferential Trade Arrangements in South Asia

Agreements	Signed/ Entered into Force	Notes
BIMSTEC	2004	FTA-regional
SAFTA	2006	FTA-regional
SAPTA	1995	PTA Regional
ASEAN-India	2004	Framework Agreement
India-Gulf Cooperation Council (GCC) Framework Agreement	2004	
India-South African Customs Union (SACU) Trade Agreement	Proposed	PTA
India-MERCOSUR	2005	PTA

Source: Asian Development Bank (2006)¹²²

138. Regional trade agreements co-exist with bilateral agreements within the South Asian region, reflecting the attempts of countries to find more congenial agreements that would bring about mutually beneficial trade results (Table 3). The details of the bilateral trade agreements are in Annex 2-3.

¹²¹ Kumar, Rajiv and Singh, Manjeeta. 2009. India's Role in South Asia Trade and Investment Integration. ADB Working Paper Series on Regional Economic Integration. No. 32. Page 1.

¹²² ADB (2006). Asian Development Outlook. Asian Development Bank.

Table 2-3. Bilateral Agreements within South Asia

Country	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
Afghanistan		N	N	PTA (2003)	N	N	FTA (2010)	N
Bangladesh	N		FTA (2009)	TA (2006)	N	N	FTA (UD)	FTA (UD)
Bhutan	N	FTA (2009)		FTA (2006)	N	N	N	N
India	PTA (2003)	TA (2006)	FTA (2006)		TA (1981)	Treaty (1991)	N	FTA (1998)
Maldives	N	N	N	TA (1981)		N	N	N
Nepal	N	N	N	Treaty (1991)	N		FTA (UD)	N
Pakistan	FTA (2010)	FTA (UD)	N	N	N	FTA (UD)		FTA (2005)
Sri Lanka	N	FTA (UD)	N	FTA (1998)	N	N	FTA (2005)	

TA - Trade Agreement; FTA - Free Trade Agreement, PTA - Preferential Trade Agreement; UD - Under Discussion; N – None. Date/Year denotes year of signing of respective agreement.
Source: www.bilaterals.org and respective Trade Ministry websites

139. Dasgupta (2010)¹²³ also highlights some of the recent updates on bilateral trade agreements among South Asian countries.

Bhutan and India

140. The free trade agreement between Bhutan and India that expired in March 2005 was renewed for another 10 years. This yielded a notable rise in Bhutan's exports to India.

141. Moreover, Bhutan and India signed a series of four agreements in 2009 (energy, educational, and vocational needs) for the preparation of detailed project reports for 10 hydropower projects¹²⁴. Of the 10 projects, 6 will be financed through an intergovernmental financing model, whereby India will supply 40 percent of the cost as grants and the remaining 60 percent as loans.

India and Sri Lanka

142. Traditionally, Sri Lanka's exports to India have been relatively small, but since the signing of the India–Sri Lanka Free Trade Agreement (ISLFTA), Sri Lanka's bilateral exports have soared compared to those of other non-landlocked countries, and relative to growth levels of Indian overall imports.

143. Although principally an agreement in trade in goods, the ISLFTA, also provided other benefits:

- boost to services trade and FDI, in particular:
 - in air travel, the open skies agreement brought in several new carriers; Sri Lanka also allowed visa on arrival for Indian tourists¹²⁵

¹²³ Dasgupta Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

¹²⁴ Bhutan is well endowed with mountainous, glaciated peaks that feed its four main rivers with potential hydroelectric power-generating capacity estimated at 30,000 megawatts (MW), of which about 26,000 MW are commercially viable.

¹²⁵ South Asia Report. 2007. South Asian Conference on Trade and Development 2007 Harnessing Gains from Trade: Domestic Challenges & Beyond. 19-20 December 2007. http://www.centad.org/events_24.asp

- in transshipment (70% from India), and
- in FDI (India joined the top five investors, with cumulative investment of US\$2.5 billion);
- the scope of product coverage was enhanced through a —negative list approach;
- a faster pace of implementation was used—for example, duty-free access was granted by India within three years of signing on 81 percent of the agreed items, and similar reciprocity was pursued by Sri Lanka; and
- rules of origin were simplified.

Pakistan and Sri-Lanka

144. By 2010, both countries will lay each other's markets virtually open to thousands of their local products. The final phase of the Agreement will provide duty free access for an additional 4,000 products including fish, meat, and vegetable products, foliage and plants, sugar and biscuits, pastry and cakes, mineral products, fibre boards, leather and leather-based products, footwear, gems and jewelry, value-added copper products, electrical items, printed circuits, bicycles, boats and floating structures¹²⁶.

Bangladesh and India

145. Bangladesh and India signed a series of new agreements in January 2010 to address some of the barriers to bilateral trade through new trade and transit provisions:

- Greater market access for Bangladesh. India has extended duty-free access beyond its South Asian FTA commitments, broadening the scope of goods to benefit from duty-free access to India, with the aim of narrowing the large trade gap.
- Promotion of transit links between Bangladesh and India. India also agreed on transit rights for goods from India's northeastern state of Tripura to Chittagong, including a new rail link. The new links will benefit both countries by reducing transport costs for Indian exporters in the border regions and by gaining greater revenues for Bangladesh from transit and port fees.
- Regional trade facilitation. India also agreed to a long-pending request from Bangladesh to allow rail transit from Bangladesh to Nepal and Bhutan, thereby benefiting all three of India's regional trade partners as India expands its demand for underused port facilities and services, and as Bangladesh's, Bhutan's, and Nepal's landlocked regions gain greater market access for their exports.

146. While the new agreement will have direct benefits to India and Bangladesh, it is also hoped to benefit the neighboring landlocked countries of Nepal and Bhutan as well as the northeastern border regions of India.

147. On the other hand, as earlier stated, regional trade agreements co-exist with bilateral agreements within the South Asian region. This seems to be a practical approach: forging both regional and bilateral ties to stimulate trade. However, pundits worry about the so-called 'spaghetti bowl' effect of bilateral trade agreements that may give rise to conflicting or contradictory trade policies and preferences, which may constrain trade instead of enhancing it. It seems that the bilateral trade agreement approach is preferred by countries that find it difficult to negotiate feasible and practicable multilateral trade arrangements.

¹²⁶ <http://www.pakistanhc.lk/pages/FTA.htm>

148. Bilateral trade agreements are not always an unmitigated blessing to contracting parties, especially the smaller or weaker party in the agreement. Ahmed and Ghani (2007, page 34), for example, have pointed out the experience of Sri Lanka with its bilateral trade agreement with India (Box 2-1).

Box 2-1. Exclusionary policies and rules of origin in India-Sri Lanka Free Trade Agreement

Strong exclusionary policies were applied to products in which Sri Lanka has the greatest comparative advantage. The top 20 exports of Sri Lanka to the world including India at the 6-digit HS level accounted for 46% of Sri Lankan exports in 1999. India subjects 15 out of these 20 to either a tariff rate quota (meaning the tariff preference applies only up to a pre-specified quantity of imports) or negative list exception.

The rules of origin and rules of destination requirements further restrict exports. Apparel exports from Sri Lanka are subject to the tariff rate quota of 8 million pieces but at least 6 million of those pieces should be manufactured from fabrics of Indian origin exported to Sri Lanka from India. Exports of tea from Sri Lanka at the preferential tariff are not to exceed 12.5 million kilograms within a calendar year. Both products are also subject to a uniquely South Asian restriction called the rule of destination. The preference applies only if the products enter through specific Indian ports.

Source: Ahmed and Ghani (2007)

149. However, it cannot be denied that the India-Sri Lanka Free Trade Agreement has also conferred gains on both countries such as strengthening trade and investment linkages and industrial restructuring. R. Das (2009) cites the case of an Indian tire company investing in Sri Lanka to produce export-oriented tires to cater to the growing markets in Pakistan, the Middle East and other countries. India has become the third largest source of foreign direct investments in Sri Lanka. UNCTAD (2003) points out that Sri Lanka received Indian investments of US\$145 million in a very short period. The trade deficit of Sri Lanka has come down to less than half, prompting Sri Lanka to expand the scope of the India-Sri Lanka Free Trade Agreement (R. Das, 2009, page 48)¹²⁷.

South Asia Free Trade Area agreement

150. Article III. Section 2.d. of the South Asia Free Trade Area (SAFTA) Agreement provides for the:

“free movement of goods, between countries through, inter-alia, the elimination of tariffs, para-tariffs and non-tariff restrictions on the movement of goods, and any other equivalent measures.”¹²⁸

151. The elimination of tariffs is further explained by way of a phased tariff liberalization program (TLP) stipulated under Article VII of the SAFTA. The provisions of this TLP are summarized in Box 2-2.

¹²⁷ Das, Ram Upendra. 2009, Regional economic integration in South Asia: prospects and challenges, RIS Discussion Papers, Discussion Paper No. 157, New Delhi: Research and Information System for Developing Countries; UNCTAD (2003), *World Investment Report*, Geneva: UNCTAD.

¹²⁸ Agreement on the South Asia Free Trade Agreement.

Box 2-2. Provisions of Phased Tariff Liberalization Program in SAFTA		
Phase	Non Least Developed States (NLDS) India, Pakistan, Sri Lanka	Least Developed Countries (LDC) Bangladesh, Nepal, Bhutan, Maldives and Afghanistan
Phase 1	Reduce tariffs from existing levels to 20% from Jan 1, 2006 to Jan 1, 2008 of equal proportions annually; If tariffs are already less than 20% by that Jan 1, 2006, reduce the actual tariff by 10% each during the two years between Jan 1, 2006 and Jan 1, 2008.	Reduce existing tariff rates to 30% within 2 years after the agreement comes into force on Jan 1, 2006; If the rates are already below 30% by Jan 1, 2006, there will be an annual reduction of 5% for each of the two years up to Jan 1, 2008
Phase 2	With the exception of Sri Lanka, reduce tariffs from 20% or below to 0- 5% within five years by Jan 1, 2013, Sri Lanka gets an additional year i.e. until Jan 1, 2014	Reduce tariffs from 30% or below to 0- 5% in 8 years, by Jan 1, 2016
Source: Agreement on the South Asia Free Trade Agreement		

152. To provide greater market access, India unilaterally reduced tariffs to zero per cent for LDCs since January 2008 one year ahead of December 31, 2008 deadline stipulated in the SAFTA Agreement. As a result, bilateral trade within the region has increased not only for India but also for the rest of the South Asian countries. (Annex 2-4).

153. Various studies have stressed that it took South Asian countries ten years to agree on the preferential tariff agreement and another ten years to devise SAFTA (Kardar, 2010; Weerakon, 2010), which indicates the difficulties faced by these countries on the way to regional cooperation and integration¹²⁹. These authors point to the mutual distrust arising from historical dispute political disputes such as that between India and Pakistan, the two largest economies in the region. Kardar (2010, page 20) argues that for the region to exploit its advantages in terms of demography, size of the population, its rate of growth and its composition, South Asian countries have to “sidestep their long and convoluted history of political disputes and embrace regional cooperation as part of their national vision. . . “

154. Meanwhile, the preferred approach for increasing trade and sustaining growth seems to be bilateral trade agreements. Weerakon (2010) notes that bilateral trade agreements are more liberal and have fewer products in the sensitive lists than the lists under SAFTA. For example, whereas India has a sensitive list of 865 items under SAFTA, under the India-Sri Lanka Free Trade Agreement, Sri Lanka is subject only to a negative list of 419 items (Weerakon, 2010; Kardar, 2010).

155. The tariff liberalization program under the India-Sri Lanka Free Trade Agreement and the Pakistan-Sri Lanka Free Trade Agreement has a time horizon of 8 years and 3 years, respectively compared to the SAFTA time frame, which has a period of 10 years to reduce duties to zero (Weerakon, 2010). In other words, bilateral agreements have been more effective in reducing tariff barriers than SAFTA (Kardar, 2010).

¹²⁹ Kardar, Shahid 2010. “South Asia-Intra Regional Cooperation: The Way Forward,” draft report submitted to the Asian Development Bank, May; Weerakon, D. 2010, “SAFTA: Current status and prospects,” Washington DC: The World Bank.

II. BENEFITS OF TRADE FACILITATION

Understanding trade facilitation

156. There is no standard definition of trade facilitation in public policy discourse. In a narrow sense, trade facilitation efforts may simply mean addressing the logistics of moving goods through air and maritime ports; it may include the smooth movement of goods over land and seas through efficient documentation and cross border procedures between countries. In this sense, it is associated with cross-border trade. In recent years, the definition has been broadened to include the environment in which trade transactions take place, to include transparency and professionalism of customs and regulatory environments, as well as harmonization of standards and conformance to international or regional regulations.

157. This echoes the view propounded by De, Chaturvedi and Khan (2010) that trade facilitation reduces the cost of doing business for all parties concerned by eliminating unnecessary administrative burdens associated with bringing goods and services across the borders. Enhancing trade facilitation could generate a global increase in trade volumes (Wilson, Mann and Otsuki, 2005) while there are delays arising from trade barriers reduce trade volumes (Hummel, 2001)¹³⁰.

158. Arnold's (2007)¹³¹ definition of trade facilitation covers improvements in all aspects of supply chain performance. This will include simplification of trade procedures and modernization of customs and other regulatory structures, improvements in transport and communications services, increased use of information technology to monitor product flows, and supply chain integration. The effort at trade facilitation comes at two levels: government efforts to improve policy and procedures, and private efforts to improve management and use of logistics services. To make government efforts effective, it will be important to identify the necessary policy levers. To motivate greater private sector efforts not only to improve management and use of logistics services but also to invest in transport and logistics there is a need for government to develop an environment conducive to private sector investments in supply chain management. Transparency and professionalism of customs rules, regulations and procedures, as well as harmonization of standards and conformance to international or regional regulations are indispensable to the development of a favorable environment.

159. A similar understanding of trade facilitation suggested by Roy and Banerjee (2010)¹³², which they drew from the World Trade Organization, emphasizes the process of simplification and harmonization of international trade procedures covering activities, practices and formalities involved in collecting, presenting, communicating, and processing data required for the movement of goods in international trade. Roy and Banerjee view trade facilitation at two levels: (a) simplification and harmonization of activities and procedures at the border such as

¹³⁰ De, Prabir, Sachin Chaturvedi and Abdur Rob Khan, 2010, Transit and border trade barriers in South Asia, page 171, Chapter 6 in Ahmed, S., S. Kelegama and E. Ghani, 2010. Promoting Economic Cooperation in South Asia: Beyond SAFTA. Washington DC: The World Bank; Wilson, J., C. Mann, and T. Otsuki, 2005, "Assessing the potential benefits of trade facilitation: a global perspective," The World Economy 28 (6); Hummels, D. 2001, "Time as trade barrier," GTAP Working Paper 1152, Purdue University, Indiana.

¹³¹ Arnold, John. 2007. "The Role of Trade Facilitation in Export Growth," in Sadiq, Ahmed and Ejaz Ghani (editors) 2007. *South Asia: Growth and Regional Integration*. Washington DC; The World Bank.

¹³² Roy, J. and P. Banerjee. 2010. "Connecting South Asia: The Centrality of Trade Facilitation for Regional Economic Integration," Chapter 5 in Ahmed, Saman Kelegama and Ejaz Ghani. 2010. *Promoting Economic Cooperation in South Asia: Beyond SAFTA*. Washington DC: World Bank.

import and export procedures, transport formalities, and payments, insurance, and other financial requirements; and (b) factors behind the border such as domestic transport and logistics infrastructure and regulatory policies that affect the flow of goods and services within a country's boundaries. Both border activities and behind-the-border factors affect the overall transaction costs of trade.

Impact on intra-regional trade and regional cooperation and integration

160. Wilson and Otsuki (2007, page 239) have argued that the South Asian region is likely to gain by expanding intra-regional trade through the complementary investments in infrastructure, continued regulatory reform, and other policy initiatives. This is because of the distance of South Asian exporters from their traditional OECD markets, which gives rise to significantly higher transport costs. A bonus from expanding intra-regional trade is the benefit of increased stability against external shocks.

161. A case can, therefore, be made in favor of vigorous trade facilitation because of what it does for increasing intra-regional trade and regional cooperation and integration. In shifting focus toward greater intra-regional trade, South Asian countries will do well by paying attention to trade facilitation as an effective instrument to stimulate intra-regional trade.

162. South Asia has one of the lowest levels of intra-regional trade anywhere in the world, due primarily to prevailing trade barriers. Easing those trade barriers, that is, pursuing trade facilitation can lead to greater intra-regional trade. A gravity model estimated by Wilson and Otsuki indicated significant gains in trade from improving trade facilitation and trade liberalization¹³³. Four critical areas comprising 'trade facilitation,' namely, (a) port efficiency, (b) the customs environment, (c) the regulatory environment, and (d) the service-sector infrastructure, have been identified. They estimated the gains to the South Asian intraregional manufacturing trade from capacity building in these four categories of trade facilitation. If countries in South Asia raise capacity halfway to East Asia's, the average trade is estimated to rise by US\$2.6 billion approximately 60% of the total intraregional trade in South Asia. The area that will produce the most significant gain is service-sector infrastructure (US\$1.2 billion) followed by efficiency in air and maritime ports (US\$0.7 billion). Wilson, Mann and Otsuki find that India representing 80% of total GDP in South Asia can act as a catalyst along with other countries in the region to advance the trade facilitation agenda.

163. A summary of the gains from trade facilitation is summarized in Box 2-3¹³⁴.

¹³³ John Wilson and Tsunehiro Otsuki, 2007. "Cutting trade costs and improved business facilitation in South Asia," Chapter 9 in Sadiq Ahmed and Ejaz Ghani (editors). South Asia: Growth and Regional Integration. Washington, DC: The World Bank .

¹³⁴ Compiled by Wilson and Otsuki (2007).

Box 2-3. The benefits of trade facilitation

- Trade liberalization and facilitation would increase the volume of APEC merchandise exports in 1996 by 3.3 percent in 2010 (APEC, 1999);
- Reduction in transport cost explained 8 to 9 percent of the average growth in real bilateral trade flows among 16 OECD countries during the late 1950s to 1980s (Baier and Bergstrand, 2001);
- 1 percent reduction in the cost of maritime and air transport services could increase Asian GDP by some US\$3.3 billion (UNCTAD, 2001);
- Each day saved in shipping time in part due to faster customs clearance is worth 0.5 percent reduction of ad valorem tariff (Hummels, 2001);
- Moving to electronic documentation for trade would result in a cost savings of 1.5 to 15 percent of the cost of an imported item (Australian Department of Foreign Affairs and Trade and Chinese Ministry of Foreign Trade and Economic Cooperation, 2001);
- Improvement in customs environment results in about US\$107 billion gain in a study of 75 countries; the gain from improvements in regulatory environment is US\$83 billion; the gain from improvements in services sector infrastructure and e-business usage is US\$154 billion (Wilson, Mann and Otsuki, 2004)

Source: Assessing APEC trade liberalization and facilitation: 1999 update¹³⁵

164. Trade facilitation can start out a virtuous cycle. By easing trade constraints faced by each other, South Asian countries can achieve greater intra-regional trade that can strengthen regional cooperation and integration, which expands opportunities and markets, essential elements of growth and poverty reduction. Sustained growth paves the way for more trade openness and expansion, a large part of which will be intra-regional trade, which motivates further regional integration, growth and poverty reduction. The policy key is provided by trade facilitation that reduces trade and transport barriers, which thereby promote intra-regional trade, facilitate mobility of factors, support the development of agglomeration economies with more investments on infrastructure and other growth-and-trade-enhancing facilities within the region, and thus, lead to higher regional growth. The opportunities given to lagging areas within the region to catch up with the more progressive areas will help reduce poverty and income inequalities. Moving to a sustained and rapid growth path brings about greater motivation to intensify intra-regional trade and regional cooperation and integration and this happens through the critical step of easing constraints to trade and factor mobility.

¹³⁵ Asia Pacific Economic Cooperation (APEC), 1999, "Assessing APEC trade liberalization and facilitation: 1999 update," Singapore; Baier, S. and J. Bergstrand, 2001, "The growth of world trade: tariffs, transport costs, and income similarity," *Journal of International Economics*, 53 (1), pp. 1-27; United Nations Conference on Trade and Development (UNCTAD), 2001, *E-Commerce and Development Report*, Geneva: UNCTAD; Hummels, D., 2001, "Time as trade barrier," Department of Economics, Purdue University, Lafayette, IN.; Wilson, J., C. Mann, and T. Otsuki, 2004, "Assessing the potential benefit of trade facilitation: a global perspective," Working Paper 3224, Washington, DC: The World Bank; Australian Department of Foreign Affairs and Trade and Chinese Ministry of Foreign Trade and Economic Cooperation, 2001, "Paperless trading benefits to APEC," http://www.dfat.gov.au/publications/paperless/paperless_trading.pdf

Trade Complementarity

165. Regional economic integration could also help exploit the profound synergies that have developed between the economic structures of subregional economies. For instance, while there are economies in the region that have surplus capital resources, there are also economies with inadequate domestic savings for rapid development.

166. In the case of South Asia, the region is characterized by complementarities in the demand and supply of technology and skilled manpower.¹³⁶

167. Regional cooperation, by generating intraregional demand, could supplement external demand and reduce the vulnerability of the region owing to over-dependence on other regions. Regional cooperation could also help in exploiting the existing capacities of the region fully. Bilateral FTAs in South Asia are proof that trade is capturing complementarities between countries¹³⁷. A good example of this at the inter-regional level is the growing scarcity of labor in Japan and Republic of Korea, which is complemented by labor abundance in South-East and South Asian countries.

168. Similarly, some Asian economies are focused predominantly on manufacturing and hardware capabilities while others have complementary capabilities in software and services. Already regional production networks have begun to be developed across Asia to take advantage of these synergies through vertical specialization. Regional economic integration could help in exploiting the potential for such rationalization or restructuring more fully and in expediting its development for the benefit of all¹³⁸.

169. In particular for South Asia, recent trade data indicates significant trade and service sector complementarities across the region¹³⁹. Increased trade flows are likely to engender technical efficiency, improve resource allocation and allow countries to create niches by specializing in different products within a given industry. A number of studies have predicted gains from regional trade. A study suggested that a free trade arrangement (FTA) between Pakistan and India could have increased their trade flows ninefold within a ten-year period (Burki 2004)¹⁴⁰.

170. Mukherji (2002)¹⁴¹ identified as many as 113 potentially tradable items within the SAARC region. These include tea and coffee, cotton and textiles, garments, rubber, light engineering goods, iron and steel, cement, edibles (dry fruits, spices and vegetables), medical equipment, pharmaceuticals and agro-chemicals, among others.

171. Zones of comparative advantage embrace countries making trade feasible across these zones:

¹³⁶ What will be the benefits of an Asian Economic Community? Potential of an Asian Economic Community. URL: http://www.newasiaforum.org/Potential_of_an_Asian_Economic_Community.htm

¹³⁷ Shaheen Rafi Khan, Moeed Yousaf, Faisal Haq Shaheen, and Azka Tanveer. Regional trade agreements in South Asia: trade and conflict linkages. http://www.idrc.ca/en/ev-132669-201-1-DO_TOPIC.html#ch04

¹³⁸ Nagesh, Kumar. 2007. Towards Broader Regional Cooperation in Asia. UNDP- Asia-Pacific Trade and Investment Initiative

¹³⁹ Shaheen Rafi Khan, Moeed Yousaf, Faisal Haq Shaheen, and Azka Tanveer. Regional trade agreements in South Asia: trade and conflict linkages. http://www.idrc.ca/en/ev-132669-201-1-DO_TOPIC.html#ch04

¹⁴⁰ Burki, S.J. (2004) Prospects of Peace, Stability and Prosperity in South Asia: An Economic Perspective, Islamabad.

¹⁴¹ Mukherji, I.N. (2002) 'Charting a free trade area in South Asia: instruments and modalities', in T.N. Srinivasan (ed.) Trade, Finance and Investment in South Asia, New Delhi: Social Science Press, SANEI, pp. 79–108.

- Pakistan could import from India pharmaceuticals, textile machinery, light engineering industry items, refrigerators, irons, air-conditioners, washing machines, televisions, sugar, cement, organic and inorganic chemicals, and paper and pulp, which it currently does from elsewhere at much higher cost.
- Reciprocally, Pakistan could export to India cotton, surgical and sports goods, leather products and dry and fresh fruits.
- Sri Lanka, Bangladesh and India all export tea, while Pakistan imports it.
- India and Bangladesh export jute and jute products to the rest of the SAARC member countries.
- Pakistan and India produce cotton, which its neighbors require.
- India and, to a lesser degree, Pakistan, export manufactured goods within the region.

Reduction of Informal trading

172. Formal trade statistics in South Asia do not reflect the total picture of intra-regional trade. It is common knowledge that a substantial volume of trade flows through the illegal channels, i.e. either smuggled across borders or transiting through third countries. Taneja (cited in Kardar, 2010) estimates South Asian informal trade to be around US\$1.5 billion or 72% of formal trade in the region in 2004-2005. The volume of informal trade indicates the potential for formal trade in the region.

173. Shaheen, et al.¹⁴² noted that informal trade (smuggling) in South Asia also is also reliable index of trade complementarity. The major items currently being traded informally in the region include cloth of different varieties, cosmetics, jewelry, bicycles, medicines, cattle, sugar, spices, raw cotton, garments, machinery, cement, aluminum, petroleum products, automobiles, tires and tubes, electrical goods, unprocessed food, rice and flour.

174. According to Brown and others¹⁴³, the trade restrictions and shared border between Pakistan and India has significantly contributed to informal trading between the two countries exceeding formal trade by over US\$150 million. On the other hand, the removal of trade barriers would eliminate the need to resort to informal trade channels and could potentially result in annual trade flows of at least US\$2.62 billion.

175. Trade facilitation could lead to more formal trade in the region. Removing constraints to trade facilitation, e.g. through simplification of documentation, entry procedures, reforming border crossing requirements, and others will motivate more formal trade by providing an environment that is conducive to formal transactions.

¹⁴² Shaheen Rafi Khan, Moeed Yousaf, Faisal Haq Shaheen, and Azka Tanveer. Regional trade agreements in South Asia: trade and conflict linkages. http://www.idrc.ca/en/ev-132669-201-1-DO_TOPIC.html#ch04

¹⁴³ Brown, Oli, Qobo, Mzukisi, and Ruiz-Dana, Alejandra. 2008. The role of regional trade integration in conflict prevention. In *Regional Trade Integration and Conflict Resolution*. Edited by Shaheen Rafi Khan. IDRC.

III. CONSTRAINTS TO TRADE FACILITATION IN SOUTH ASIA

176. Countries that have efficient customs, good transport networks and fewer document requirements enjoy a tremendous advantage in global and regional trade. In fact, they score quite high in various indices of competitiveness and ease of doing business, which are often translated to larger quantities of trade, higher incomes and more rapid economic growth. Conversely, the World Bank¹⁴⁴ observes that there is a general perception that the more documents required and the longer it takes to move a product or good, the higher is the tendency for corruption in customs. This can in turn, propagate illegal activities such as smuggling, and translate to incurring opportunity costs in terms of foregone taxes.

177. It is important to determine the constraints to trade facilitation in South Asia. Wilson and Otsuki (2007, page 236) state that the low level of intra-regional trade has contributed to weak export performance in South Asia. They argue that measures to facilitate trade and lower logistics costs in South Asia are among the most important steps to promote intra-regional trade and economic integration.

178. Trade facilitation can create tremendous opportunities for intra-regional trade in South Asia. However, a number of factors constrain efforts to facilitate trade. Those factors are called 'at-the-border' and 'behind-the-border domestic issues and institutional structures, which create an impediment to efficient intra-regional trade.

179. Behind-the-border issues and structures are very important influences on the pattern and volume of intra-regional trade. For example, some South Asian countries heavily rely on ports to move people and cargo across borders, e.g., Chittagong port in Bangladesh. In this case, delays owing to congestion and sub-standard facilities in ports will adversely impact on the ability to exploit trade opportunities across the border.

180. Roy and Banerjee lists key trade facilitation issues at the border as well as those "behind-the-border" (Table 2-4).

Table 2-4. Key Trade Facilitation Concerns

At the border issue	Behind-the-border issue
Customs and other border formalities like non-tariff barriers	Quality and cost of transport infrastructure
Transparency of regulations	Availability of multimodal transport
Efficacy of regulatory agencies	Quality of logistical support in the hinterland such as warehousing facilities
Efficacy and logistical capability of ports, airports, and land border crossings	Efficacy and transparency of regulations of within-country border crossings (that is, crossing across provincial or municipal lines)
Cost and quality of international transport linkages	
Quality of international institutional linkages such as Mutual Recognition Agreements and Pre-shipment Inspection Agreements	

Source: Roy and Banerjee (2010)

¹⁴⁴ World Bank. Doing Business 2009-2010.

181. Those constraining factors correspond to the four categories identified by Wilson, Mann and Otsuki (2004) as key constraints, namely: (a) port efficiency, (b) customs environment, (c) regulatory environment and (d) service-sector infrastructure.

182. Port efficiency, the customs environment and the regulatory environment constitute 'at-the-border' issues while service-sector infrastructure, e.g., multimodal transport, logistical support and other infrastructure are 'behind-the-border' issues. In addition to this list are (a) high levels of protection accorded to domestic industries through high tariff walls, (b) and political conflicts, including unresolved issues between countries and (c) land border issues, which include border checks and procedures, and coordination activities between authorities at either side of the border.

183. Applying this frame of thought to trade facilitation, the following constitute highly significant barriers to trade facilitation in South Asia: (a) high tariff walls; (b) inefficiencies in port operation and logistics performance, (c) customs and regulatory environment, and (d) political conflicts between countries in the region. Tedious land border procedures including lack of coordination between authorities at either side of the border constitute another significant constraint, which we have lumped with customs and regulatory environment. The lack of an orderly land order procedures and coordination at the border give rise to high transaction costs for moving goods across borders¹⁴⁵.

184. At this juncture, a word of caution is proper. Due to time and budget limitations, this paper uses only secondary data and information that it has drawn from various studies and reports. Data limitations forced a combined discussion of port efficiency and logistics performance. Likewise, it is noted that there is scant information on policies and regulatory frameworks and service-sector infrastructure but they have been listed as significant constraints to trade facilitation notwithstanding the paucity of data or empirical evidence indicating that they indeed are binding constraints. This is because the policy and regulatory frameworks provide the environment in which intra-regional trade is conducted. Thus, investment, consumption and trade decisions of economic agents are made under particular policy and regulatory framework of the country concerned; hence, the importance of policy and regulatory frameworks that are conducive to trade facilitation and ultimately to intra-regional trade. On the other hand, adequate and efficient transport network, all-weather roads, ports and airports are indispensable in maintaining close and sustained trade relationships among countries in the region.

185. Future studies should assess empirically the significance of a country's policy and regulatory environment and the state and readiness of service-sector infrastructure to trade facilitation. Infrastructure includes ports, airports, roads, and telecommunications facilities, which are the hard infrastructure needed to facilitate trade and commerce among South Asian countries.

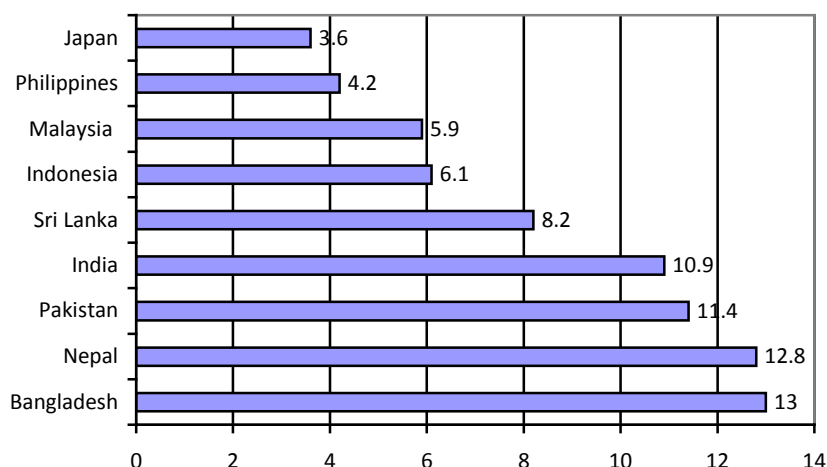
High tariff walls

186. South Asian countries have liberalized trade in the 1990s and thus, have reduced protection to domestic industries through opening of their economies. However, despite the implementation of the Tariff Liberalization Program South Asian countries are reported to still

¹⁴⁵ Seaports and airports facilitate global trade and also intra-regional trade but it is land borders, which facilitate intra-regional trade. See Ahmed and Ghani (2007).

have the highest weighted average tariff rates¹⁴⁶ in Asia based on the Global Competitiveness Report, 2009-2010 vis-à-vis ASEAN countries even though the South Asian tariffs are lower than the weighted average tariff of China (13.9). See Figure 2-5.

Figure 2-5. Weighted Average Tariff of South Asia and Selected Asian Countries. 2009-2010



Source: Global Competitiveness Report, 2007-2009. World Economic Forum

187. Bangladesh is the most protected economy with maximum tariff rates of more than 100 percent, additional taxes on imports, and various non-tariff barriers. Pakistan reduced its maximum duty but some selective tariffs remain high (e.g., 50 percent and 100 percent for completely-knocked-down (CKD) automobiles). Sri Lanka has the lowest average tariff rates but continues to protect specific manufacturing and agricultural activities. Nepal has generally low tariffs but a few high industrial tariffs (Ahmed and Ghani, 2007; Kardar, 2010).

188. Globally, except for Sri Lanka, all South Asian countries included in the survey (except Afghanistan, Bhutan and Maldives) countries are ranked at the bottom 25%, although the rankings appear to show an improvement within the last three years Table 2-5).

Table 2-5. Ranking in terms of Weighted Average Tariff*

Country	2007-2008	2008-2009	2009-2010
Sri Lanka	75	88	88
India	118	116	104
Pakistan	110	119	105
Bangladesh	127	120	118
Nepal	115	131	116

Source: Global Competitiveness Reports, 2007-2009. World Economic Forum
*(Out of 133 economies)

189. The weighted average tariff weighs each tariff by the share of total imports in that import category. Thus, if a country has most of its imports in a category with very low tariffs, but has many import categories with high tariffs but virtually no imports, then the trade-weighted

¹⁴⁶ Calculated as the average of the applied tariff rates, including preferential rates that a country applies to the rest of the world or simply, the average rate of duty per imported value unit.

average tariff would indicate a low level of protection. The standard way of calculating this tariff rate is to divide total tariff revenue by the total value of imports.

190. The high weighted average tariff in South Asia can also be attributed to the high level of protection for most of its products since the Tariff Liberalization Program does not cover the tariff lines that are kept in the sensitive list (negative list) by the member states. The summary of the Sensitive Lists as stipulated under the SAFTA are shown in Table 2-6

Table 2-6. Sensitive List under SAFTA

Countries	No of tariff lines	Percentage of total lines
Bangladesh	1254	24%
Bhutan	157	3%
India	884	16.90%
Maldives	671	12.80%
Nepal	1310	25.50%
Pakistan	1183	22.60%
Sri Lanka	1065	20.30%

Source: Agreement on the South Asia Free Trade Agreement.

191. The early removal of the sensitive lists is deemed critical to improve further the intraregional trade within the SAFTA; it may likewise promote greater international trade outside of the region.

192. Maintaining extensive sensitive lists reduce the potential gains from intra-regional trade, which will undermine the effectiveness of SAFTA's Tariff Liberalization Program (Kardar, 2010; Weerakon, 2010; Das, R.U., 2009).¹⁴⁷

193. Will South Asian countries benefit from an aggressive tariff reduction program? Econometric results reported by Kardar (2010) indicate that it is mainly India, which will significantly benefit from a 100% tariff reduction in terms of a positive intraregional trade balance although there are gains in both exports and imports for all South Asian countries. It is noted that India's gains will far exceed those of other countries in the region. Bangladesh can expect a reduction in output as a result of tariff reduction while Pakistan and Sri Lanka may experience a reduction in employment rates. Tax revenues for all South Asian countries will fall due to the elimination of tariffs. The estimated results are static and there is a need to view these in a dynamic sense, that is, consider the opportunities opened to countries that will become hubs for transit trade and the net welfare effects of trade creation and trade diversion. To maximize gains from trade, it is not enough to use tariff reductions as the sole instrument; it needs to be supplemented with trade facilitation measures (Kardar, 2010), e.g., removal of barriers to trade, improving customs efficiency and the regulatory framework affecting tradables. A study by De (2010)¹⁴⁸ found that a 10 percent reduction in the ad valorem price (transport and tariff) would raise trade within South Asia by as much as 6 percent, a larger impact than the effects of standard reduction of at-the-border tariffs.

194. It is noted that non-trade barriers consisting of selective use of quantitative restrictions, import licensing, requirements to use state trading enterprises, and the imposition of technical

¹⁴⁷ R.U. Das, 2009. "Regional economic integration in South Asia: prospects and challenges," Research Information System for Developing Countries (RIS) Discussion Paper No. 157.

¹⁴⁸ De, Prabir. 2010. —South Asia: Trade Integration after the Global Crisis. Background paper, World Bank, Washington, DC.

standards and sanitary and phytosanitary regulations have restricted imports. Ahmed and Ghani (2007) enumerate several additional taxes at the border, which serve to inhibit trade (Table 2-7).

Table 2-7. Additional Taxes at the Border

Country	Additional Taxes
Bangladesh	Infrastructure development surcharge, advance income tax, regulatory duties, value added tax
India	Additional duty
Pakistan	Income withholding, sales tax
Sri Lanka	Ports and airports levy, customs surcharge
Nepal	Local development fee, special fee, agricultural development fee

Source: Ahmed and Ghani (2007)

Customs and regulatory environment and land border procedures

195. A discussion of constraint to trade facilitation will invariably lead to the barriers to trade, which are imposed by the customs and regulatory environment and border crossing requirements and procedure. As pointed out by Wilson and Otsuki (2007) some border crossings such as Benepole are well-developed but there also are border crossings that do not have customs facilities¹⁴⁹. Inefficient customs and land border procedures and an ineffective regulatory environment for tradables could pose a significant constraint to trade facilitation.

196. The World Bank reports that compared to other regions in Asia and the Pacific, South Asia on average, ranks second in all three trading across borders indicators: (a) most number of documents needed to export goods (next to Pacific region), (b) longest time to export and (c) cost of exporting goods (next to Central and West Asia). Table 2-8 shows some comparative figures, which indicate the relative export inefficiency of South Asia.

Table 2-8. Costs of Exporting, by Region, 2009-2010

Region	Documents to Export (Number)	Time to Export (Days)	Cost to Export (US\$ per Container)
Developing Asia & the Pacific	7.5	28.3	1,303.61
East Asia (15)	6.4	20.7	839.07
East Asia (16)	6.2	20.0	849.07
Central and West Asia (8)	7.6	54.0	2,605.14
Pacific	8.7	14.3	860.67
South Asia	8.5	32.4	1,364.10
OECD	4.3	10.5	1,089.70
World	6.7	24.0	1,386.03

- East Asia (15) - Brunei Darussalam; Cambodia; People's Republic of China; Hong Kong, China; Indonesia; Korea; Lao People's Democratic Republic; Malaysia; Mongolia; Myanmar; Philippines; Singapore, Taipei, China; Thailand; Viet Nam.

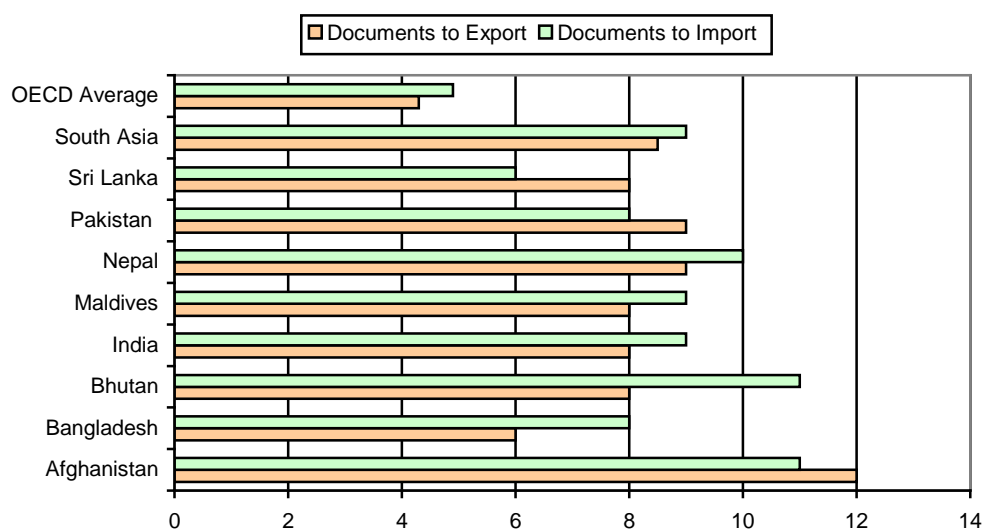
¹⁴⁹ See Uma Subramanian and John Arnold. 2001, "Forging subregional links in transportation and logistics in South Asia," Washington DC: The World Bank, as cited by Wilson and Ostuki (2007).

- East Asia (16) - East Asia (15) and Japan
 - Central and West Asia (8): Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.
 - Pacific - Australia, Fiji, French Polynesia, New Zealand, Norfolk Island
- Source: Doing Business 2010¹⁵⁰.

197. At the national levels, with the exception of Afghanistan (12 documents), most South Asian countries seem to have more or less the same number of documents required to export goods. This however, is not an indication of a harmonized customs clearance procedure in the region. The disparities in the number of documents needed are also more prominent among South Asian countries in terms of importing goods (Figure 2-68).

¹⁵⁰ Doing Business compiles procedural requirements for exporting and importing a standardized cargo of goods by ocean transport. Every official procedure for exporting and importing the goods is recorded—from the contractual agreement between the 2 parties to the delivery of goods—along with the time and cost necessary for completion. All documents needed by the trader to export or import the goods across the border are also recorded. For exporting goods, procedures range from packing the goods at the warehouse to their departure from the port of exit. For importing goods, procedures range from the vessel's arrival at the port of entry to the cargo's delivery at the warehouse. The time and cost for ocean transport are not included. Payment is made by letter of credit, and the time, cost and documents required for the issuance or advising of a letter of credit are taken into account. Local freight forwarders, shipping lines, customs brokers, port officials and banks provide information on required documents and cost as well as the time to complete each procedure. To make the data comparable across economies, several assumptions about the business and the traded goods are used.

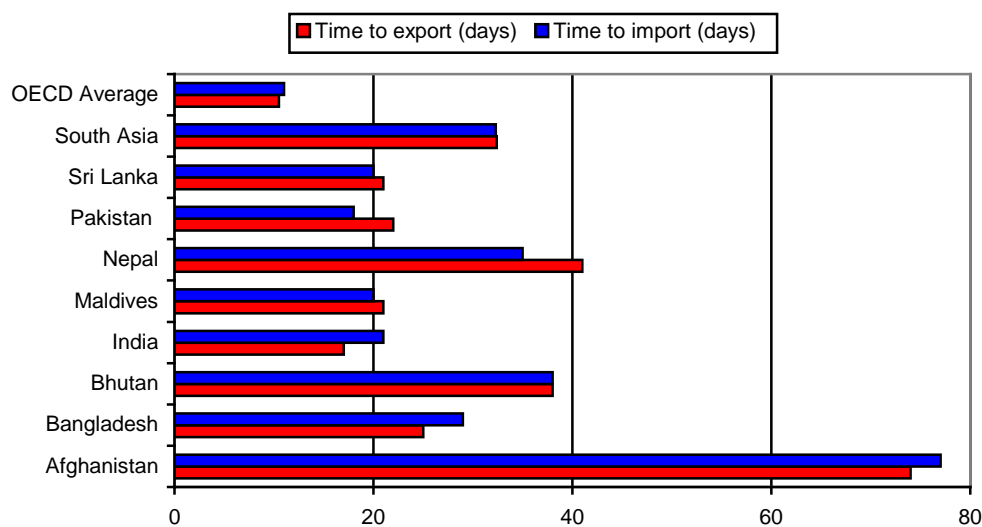
Figure 2-6. Number of Documents to Export/Import 2009.



Source: Doing Business 2010

198. This is similar for the time it takes to export and import goods with Afghanistan having the longest time to export and import goods (74 days and 77 days respectively) as shown in Figure 2-7. A comparable estimate is given by Ahmed and Ghani (2007, page 33): it takes on average more than 33 days to export from South Asia compared to 12 days from OECD countries and more than 46 days to import into South Asia compared to 14 days for OECD.

Figure 2-7. Number of Days to Export/Import 2009



Source: Doing Business 2010

199. Preparations of customs documents and inspection contribute to the delays in customs clearance. RIS (2004)¹⁵¹ reports that 22 documentations, more than 55 signatures and a minimum of 116 copies for final approval are required of consignments at the India-Bangladesh

¹⁵¹ Research and Information Systems (RIS) for Non-Aligned and Other Developing Countries, 2004, South Asia Development and Cooperation Report 2004, New Delhi: RIS

border. Each country requires different documents such as transit, export and import declarations at each side of the border (Wilson and Otsuki, 2007). For example, it takes 200 signatures in Nepal to trade goods with India, and some 140 signatures in India to trade with Nepal (Ahmed and others, 2010).

200. Overall, administrative problems with customs, lack of standardized procedures and documentation, non-transparent inspection procedures restrict trade in the region. Wilson and Otsuki (2007, page 250) report estimates done by the World Bank indicating that it takes South Asia more than 8 days on average to clear documents by sea compared to less than 6 days in East Asia and a little over than 2 days in OECD countries.

201. Some of the impediments to trade are policies that increase the time for border crossing such as restrictive regulatory barriers, complex customs and transit procedures, lack of standardization, and security checks. An example is the tediousness of crossing between India and Bangladesh where queues often exceed 1,000 trucks on the Indian side. It will take 99 hours instead of 21 hours to make that crossing (Ahmed and Ghani, 2007b). A container can take as many as 35 days to move from New Delhi to Dhaka because the maritime route is via Bombay and Singapore/Colombo to Chittagong Port and then by rail to Dhaka. The same container can reach Dhaka in 5 days if direct rail connectivity exists between New Delhi and Dhaka (Kardar, 2010).

202. For border crossings bilateral coordination is needed as delays on one side of the border can be caused by procedures on the other side or by total lack of communication between the two sides (Arnold, 2007)¹⁵². Difficulties at the land borders are aggravated by (a) requirements for back-to-back exchanges of cargo; (b) narrow and congested access roads; (c) agencies with overlapping jurisdictions and enforcement activities; (d) poor communication and coordination across the border; (e) lack of financial and testing facilities at the border; and (f) insufficient infrastructure for inspection and protection of cargo (ibid, page 212).

203. Some of the outstanding problems with border crossing are summarized in Box 2-4, which draws from Kardar (2010).

Box 2-4. Outstanding problems with border crossing: various studies

- Restrictions on transit facilities: India does not allow Pakistan transit to Bangladesh and Nepal; whereas while Pakistan allows transit to Afghanistan to trade with India, it has restricted India from crossing its borders¹⁵³
- Road protocols do not permit trucks from the importing country to travel within the host country's borders requiring offloading and on-loading of trucks at the border, e.g., India and Bangladesh (Banerjee and Roy, 2010)¹⁵⁴; India and Pakistan (Taneja, 2007)
- Trade between India and Pakistan is restricted only to one road route, that is, through Pakistan's Wagah border with India (Taneja, 2007)
- The Pakistan-India 1974 Protocol of Maritime Trade does not allow third country vessels to lift India-Pakistan-bound cargo (Taneja, 2006)¹⁵⁵

¹⁵² John Arnold, 2007, "The role of trade facilitation in export growth," Chapter 8 in Ahmed and Ghani (2007).

¹⁵³ Taneja, N. 2007, "Trade possibilities and non-tariff barriers to Indo-Pak trade," Working Papers 200, Indian Council for Research on International Economic Relations, New Delhi.

¹⁵⁴ Banerjee, P. and J. Roy, 2010, Connecting South Asia: the centrality of trade facilitation for economic cooperation, Washington DC: The World Bank.

¹⁵⁵ Taneja, N., 2006, "India-Pakistan Trade," Working Papers 182, Indian Council for Research on International Economic Relations, New Delhi.

204. There are also problems with customs clearance centers that are located far away from border-crossing facilities. The sanitary and phytosanitary testing laboratory in Kolkata is 1,000 kilometers away from the customs facility at Birgunj, Nepal. Exporters pay additional fees for vehicle detention charges for weeks while waiting for test results (Karmacharya, 2002)¹⁵⁶, which raise the costs and affects the quality of the export products (Wilson and Otsuki, 2007). In India, testing laboratories are at large distances from the port of entry (Kardar, 2010).

205. The lack of a harmonized standards and technical regulations constricts trade facilitation. Standards cover product performance, product quality, testing, certification requirements and consumer safety. Kardar (2010) gives the example of India, which imposes 68 mandatory standards and has 24 oversight agencies that create considerable confusion and raise the cost of trade transactions. Wilson and Otsuki report that South Asian firms in India and Pakistan report standards and technical regulations as very important to export success. South Asian countries have realized the importance of harmonization of standards in facilitating trade. In 1999, SAARC and the European Union signed a Memorandum of Understanding to assist the harmonization of SAARC standards.¹⁵⁷ **Box 2-5** shows how critical standards are in trade facilitation.

**Box 2-5. How critical are standards and technical regulations?
Examples from South Asia**

- Nepal's woollen carpets industry was severely affected when Germany an importer of 90% of the products, required eco-labels on the products (Shrestha and Shakya, 2002)
- Nepalese exporters often fail to present quarantine and health standard certificate at the border with India (Shrestha and Shakya, 2002)
- Indian coffee industry has had difficulties in meeting sanitary and phytosanitary standards (Damodaran, 2002)
- World Bank Technical Barriers to Trade Database show that Indian and Pakistani firms report standards and technical regulations as very important to export success at a higher percentage than countries in other regions

Source: Wilson and Otsuki (2007)

206. The more time consuming and costly it is to export or import, the more difficult it is for traders to be competitive and to reach international markets, hence the need to reduce time and cost of trading. A study by Hoekman and Nicita (2008)¹⁵⁸, finds that reducing the trade costs (as measured by the Cost of Doing Business) would boost exports by about half as much (7 percent). Another study by Martinez-Zarzosa and Marquez-Ramos, (2008) reveals that every US\$1 reduction in trade costs could increase exports by more than US\$1,000¹⁵⁹.

¹⁵⁶ Karmachaya, B. 2002, "Facilitating trade in SASEC region in the perspective of recent developments: case study of India and Nepal," paper presented at the South Asia Business Forum, South Asia Sub-Regional Economic Cooperation, New Delhi, August. Quoted by Arnold and Ostuki (2007).

¹⁵⁷ Wilson and Ostuki citing EUROPA, 2004, "Regional cooperation," http://europa.eu.int/comm/europeaid/projects/asia/regional_en.htm.

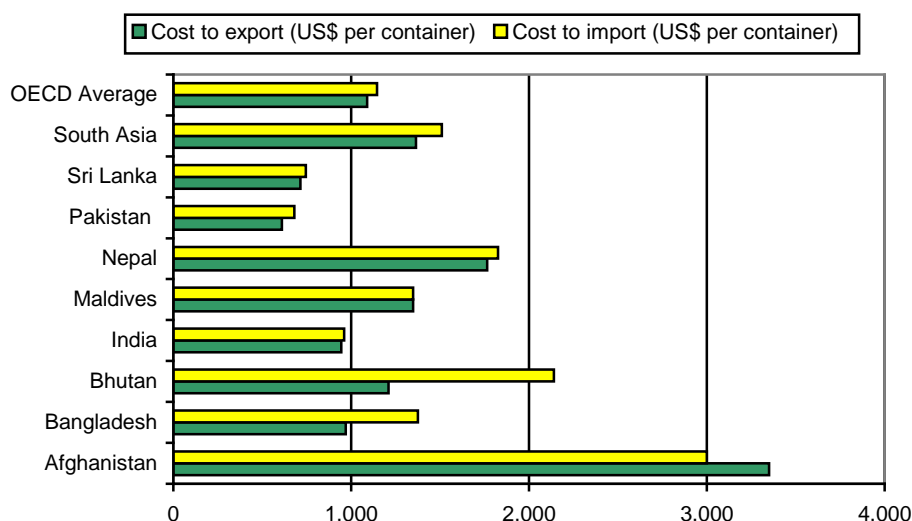
¹⁵⁸ Hoekman, Bernard & Nicita, Alessandro, 2008. "Trade Policy, Trade Costs, and Developing Country Trade," Policy Research Working Paper Series 4797, The World Bank.

¹⁵⁹ Martinez-Zarzosa, Imma, and Laura Márquez-Ramos. 2008. "The Effect of Trade Facilitation on Sectoral Trade." B.E. Journal of Economic Analysis & Policy 8 (1), article 42.

207. The importance of shifting to a trade facilitation stance is indicated by the experience of Chittagong port at Bangladesh, which upgraded to an automatic customs clearance system in 2009. The reduction in time required to clear goods from 28 days (2008-09) to 25 days (2009-2010) for exporting goods and from 32 days (2008-2009) to 29 days (2009-2010) for importing goods has contributed to the efficiency of Bangladesh trade.

208. Value-wise, however, some individual South Asian countries have been reported to have lower than the OECD average cost of exporting and importing goods (Figure 2-8). These are Sri-Lanka, Pakistan, India and Bangladesh (export only).

Figure 2-8. Cost to Export/Import (US\$ per container) 2009



Source: Doing Business 2010

209. For the last two years, there was no significant change in the cost of importing a container, except Nepal which reported a slight reduction from the US\$ 1,900 level in 2008-2009 to US\$ 1,825 in 2009-2010.

210. It is noteworthy that there have been some significant reforms in South Asia over the past few years to enhance the efficiency of trading across borders. There have been improvements in customs performance as a result of implementing reforms proposed by the World Customs Organization as indicated in Table 2-9.

Table 2-9. Recent Customs Reforms in South Asia

Reform	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Single administrative document	x	x	CTD	x	x
Harmonized code	x	compatible	x	x	x
Direct trader input	x	x			x
EDP systems	ASYCUDA	x	ASYCUDA	CARE	ASYCUDA
Green channel		limited		x	
Risk management		2006		x	
EDI	partial	x		x	
Private bonded warehouses	x	x	x	x	
Bonded factories	x	x			

Source: Ahmed and Ghani (2007); www.wcomd.org; <http://www.asycuda.org/variou> customs organizations

211. Ahmed and Ghani (2007) point out the standardization of commodity codes and the introduction of computers for processing data that have been widely accepted in South Asia. Pakistan has aggressively introduced those reforms. A single declaration replaced ten separate documents while supporting documents have been simplified. Clearance time has also been reduced with the introduction of a risk management system and effective green channel. Bangladesh likewise has achieved gains by introducing a direct trade input system as well as a system of pre-inspection. Pre-inspection has reduced the average clearance time for imports by half, which has also reduced corruption. India has introduced a computerized system for customs clearance and has established 35 dry ports to allow goods to move inland for clearance cargo, including the establishment of a network of bonder warehouses and factories.

212. Other trading across border reforms that will help improve trade facilitation and stimulate greater intra-regional trade are identified in Table 2-10. It is noted that deployment of technology such as the Electronic Data Interchange (EDI) system is not as widely adopted as in East Asian countries such as Singapore, Thailand, the Philippines and Indonesia. Only India has introduced an EDI system, which it did in 1992 (Wilson and Otsuki, 2007).

Table 2-10. Trading Across Border Reforms in South Asia 2006-2009.

Period	Country	Reforms
2006-07	India	Through the introduction of an Electronic Data Interchange (EDI) system, customs declarations are now carried out through the internet. This system has also allowed the operation of a Risk Management System (RMS), an E-manifest system, and an E-payment system which facilitated the decrease in import time by 7 days ¹⁶⁰ .
2007-08	India	India implemented electronic data interchange (EDI), allowing exporters to submit documents to customs online. The EDI system also enables customs to automatically assess export documents, making customs clearance more efficient. The new system reduced the time needed to export by 1 day ¹⁶¹ .
2008-09	Bangladesh	Introduced the automation of customs clearance at its main port-Chittagong port, shortening the time required to clear goods. ¹⁶²
No date	Pakistan	Started reforms in the Central Board of Revenue, including customs offices ¹⁶³
No date	Pakistan	Introduced electronic filing of a single shipping document at Port Qasim to streamline clearance and reduce transaction costs ¹⁶⁴
No date	Bangladesh	Reduction of steps for import and export clearance of fiber, fabric, and garments ¹⁶⁵
No date	Afghanistan	Working on customs modernization in a World Bank project ¹⁶⁶
No date	Nepal	Undertaking reforms under a Three Year Customs Reform and Modernization Action Plan (upgrading of physical facilities, administrative structure, automation of customs, simplification and harmonization of procedure ¹⁶⁷

¹⁶⁰ <http://www.doingbusiness.org/Reformers/SA2007.aspx>

¹⁶¹ <http://www.doingbusiness.org/Reformers/SA2008.aspx>

¹⁶² Doing Business 2010: Reforming through Difficult Times. World Bank.

¹⁶³ Wilson and Otsuki (2007)

¹⁶⁴ World Bank, 2004, *Global Economic Prospects: Realizing the Development Promise of the Doha Agenda 2004*, Washington DC: The World Bank.

¹⁶⁵ World Bank (2004).

¹⁶⁶ Wilson and Otsuki (2007)

¹⁶⁷ Wilson and Otsuki (2007)

Political conflicts and unresolved issues

213. Various studies (Ghani and Ahmed, 2007; Ghate, 2010; Kardar, 2010; Weerakon, 2010) observe that efforts to promote regional integration and cooperation in South Asia have suffered from regional and internal political conflicts, primarily between India and Pakistan. Disagreements over the apportionment and use of water from the Indus River, different exchange rate policies, territorial disputes, e.g., Kashmir region, and different development strategies and interventions immediately arose following the partition of colonial India by the British in 1947¹⁶⁸. The hostile attitude of the two countries toward each other has given rise to unresolved issues in the region.

214. Because of unresolved issues between the two biggest economies in the region, intra-regional trade also suffers. The bulk of India-Pakistan trade is routed through faraway Dubai, which is costly. Ghate (2010) notes that India and Pakistan both perceive the most important threat to come from the other and that many countries of the region harbor groups, which are perceived to be threats to the internal security of their neighbors. Ghate quotes the Indian foreign minister as saying that the region has become “captive to the security situation.”¹⁶⁹

215. In the case of Pakistan and India mutual distrust has gripped the mindsets of the civil and military bureaucracy, which has led to suspicions and stalled the integration process. This is in contrast to efforts by civil society and chambers of trade and commerce in the respective countries, which have leaned in favor of cooperation. (Kardar, 2010). However, the open attitude of civil society and the chambers of trade and commerce are not strong enough to check the air of mutual distrust and suspicion among two very important institutions, that is, the civil and military bureaucracies, in these countries. There has been limited success so far in efforts of civil society and chambers of trade and commerce in persuading their respective governments toward economic integration (Kardar, 2010).

216. The significance of political factors in intraregional trade is illustrated by the case of Nepal. In the past, populist and nationalistic appeals heightened by domestic party political competition managed to block the larger, joint government-to-government India-Nepal water resource projects, even after they have been formally embedded in a treaty as in the case of the Pancheshwar dam project in the Mahakali treaty (Ghate, 2010, page 17)¹⁷⁰.

217. Heightened internal political instability and conflict during the last decade has beleaguered Bangladesh, Nepal and Pakistan, which has had a distracting effect on regional cooperation and integration although all eight SAARC countries have now made the transition to democracy (Ghate 2010). A prevalence of regional disputes contributes to more distrust and feeling of insecurity. Ahmed and others (2010) enumerate these:

- The long-standing conflict between India and Pakistan over Kashmir;
- Strained Afghanistan-Pakistan relation because of allegations of support for the Taliban from sources in Pakistan;

¹⁶⁸ Rana and Dowling (2009)

¹⁶⁹ Ghate refers to the speech delivered by the Indian foreign minister to the conclave organized by SAARC Chamber of Commerce, ADB and FICCI as reported in the Financial Express, New Delhi, September 20, 2009.

¹⁷⁰ Ghate, Prabhu, 2010, “The institutions of regionalism in South Asia- do institutions matter?”, paper prepared for the Country Coordination and Regional Cooperation Division, South Asia Department, Asian Development Bank, April.

- Security and immigration issues in the India-Bangladesh border areas.

218. What has been the impact of political and internal security threats to the region? Box 2-6 lists a compilation of possible impacts on intraregional trade and the region as a whole.

219. How disruptive indeed could internal political conflict be to intraregional trade and trade facilitation? A graphic illustration in Box 2-7 is the account of the impact of internal conflict in Nepal on industrial restructuring between Nepal and India (R. Das, 2010).

220. It will be a difficult road to trade facilitation and regional integration without resolving mutual distrust and political conflicts in the region. In this regard, there is the suggestion for India to take the first critical step. ADB and the Federation of Indian Chambers of Commerce and Industry (2010)¹⁷¹ argue that if SAARC is to become a dynamic engine of growth, India may need to be more magnanimous in its approach towards its neighbors, including the grant of unilateral concessions to SAARC member countries.

221. In this regard, it will be important to develop and disseminate good analysis and information in the public domain about the benefits of regional cooperation. This is to dispel unfounded negative perceptions in the smaller countries that increased cooperation will simply lead to greater domination of India in the political and economic matters of these countries (Ahmed and others, 2010).

¹⁷¹ Asian Development Bank and the Federation of Indian Chambers of Commerce and Industry, 2010. Key proposals for harnessing business opportunities in South Asia, March 3.

Box 2-6. Some examples of possible political and security impacts on key RCI sectors

RCI Sector	Impact of political differences	Impact of perception of security threats
Trade	Restrictions to trade to a positive list rather than MFN basis	Limits number of cross border routes and crossings, and leads to tighter security controls at borders, both of which raise transaction costs; Denial of visas even to businessmen
Energy	Resources such as hydropower viewed as 'natural' resources, not to be 'exported'; Refusal to grant right of way to gas pipelines and electricity lines; Lack of political confidence that deliveries will not be interrupted in a crisis kills projects.	The risk of sabotage to gas pipelines by non-state actors
Connectivity	Although transit to third country trade is obligatory under GATT, it is in practice discretionary, used by South Asian countries as political leverage, allowed or denied according to political relations, often by allowing it subject to conditions impossible to meet	Real or perceived and alleged security considerations often used to deny or restrict trade; Restrictions on entry of motor vehicles and certain types of railway wagons necessitate costly transshipment, raising transaction costs.
Tourism		Denial of visas to regional tourists; Areas of potential tourist interest placed out of bounds
Investments	Reduced or prevented altogether by absence of political confidence; Terms made more restrictive for certain countries	Prohibited altogether from certain countries (e.g. Pakistan investments in India) or in certain 'sensitive' sectors
Trade in services	More restrictive for certain countries	Restrictions on entry visas, or on free movement of professionals

Source: Gbate (2010)

Box 2-7. Impact of political turmoil on trade and industrial restructuring

The India-Nepal trade and transit treaty giving unilateral duty free access to Nepali products to Indian market has led to some industrial restructuring. For example:

- Colgate-Palmolive India has set up a venture in Nepal for the production of 12,000 tons of toothpaste per annum and tooth powder to cater to its market in North India.
- As a result, toothpaste exports from Nepal to India grew from US\$11 million in 1997-98 to US\$61 million in 1998-99.
- Other companies like Hindustan Lever have followed suit.
- Dabur India invested in Dabur Nepal, which packages all the fruit juices sold in North India.
- Kodak Nepal, a venture of Kodak India and Eastman Kodak, USA was planning to service the North Indian market (Kumar, 2007)¹⁷².
- *However, political turmoil in Nepal disrupted this industrial restructuring and bilateral trade.*

Source: R. Das (2009)

¹⁷² Kumar, Nagesh, 2007, "Investment provisions in regional trading arrangements in Asia: relevance, emerging trends, and policy implications," RIS Discussion Paper No. 125.

IV. CONCLUSION

222. Trade facilitation has a pivotal role in fostering intra-regional trade. By removing non-tariff barriers to intra-regional trade, trade facilitation will help pave the way to greater regional cooperation and integration. Trade facilitation contributes to cross border connectivity that is critical for sustained intra-regional trade and regional growth. The connectivity among various economic agents in the emerging regional production networks allows these agents to import and export goods and services at minimum transaction costs, which otherwise face constant threats of inefficient and complicated trade procedures and documentation requirements and other cross border constraints. Building on current literature, this chapter documents the gains from trade facilitation.

223. However, there are significant constraints to trade facilitation. This chapter provides evidence of the major constraints to trade facilitation: (a) high tariff walls; (b) inefficiencies in ports operation and logistics performance; (c) inefficient custom and regulatory environment, and land or cross-border procedures; and (d) unresolved regional and internal political conflicts and strife. The available evidence shows how critical it is to address those major constraints to trade facilitation in order to inform the formulation of more effective policies for addressing those constraints.

224. Eliminating high tariff walls and non-tariff barriers, simplifying customs and border requirements will facilitate greater trade and interaction among countries of the region. Governments need better policy and physical coordination to minimize and remove altogether barriers to cross border crossing, provide landlocked countries passage through internal territories and access to seaports. Addressing regional political and internal conflicts in a resolute manner will be one of the most critical steps that policy makers of the region can address to facilitate trade and move toward greater regional cooperation and integration.

225. With the rise of new and bigger East Asian markets, it will be to the advantage of South Asia as a region to establish stronger internal economies, which can take advantage of proximity with those East Asian markets. The traditional way is to think that the way to link with and take advantage of East Asian markets is to strengthen one's own individual economy. This chapter showed the great opportunities that are being missed by South Asian countries that have followed this traditional approach and way of thinking. Regional cooperation and integration is a way to strengthen internal economies that will allow the region to tap into East Asian and global markets in a more significant way.

CHAPTER 3

BINDING CONSTRAINTS TO ENERGY TRADE AND REGIONAL ENERGY COOPERATION IN SOUTH ASIA

I. INTRODUCTION AND OVERVIEW OF THE SOUTH ASIA ENERGY SECTOR

226. South Asia is considered as one of the fastest growing regions in the world. The region represents almost a quarter (23.15%) of the world population, about 1.5 billion people as of 2008, making it both the most populous and most densely populated geographical region in the world. But as the economies and population grow, so does its demand for energy.

227. As of 2006, the primary energy supply for South Asian region was at 691.3 million tons of oil equivalent (MTOE), growing at an average annual growth rate of 3.5%. On the other hand, final consumption energy for the region was 418 MTOE and growing at 2.6 %.¹⁷³ The demand for primary energy is estimated to increase to 1,264.3 MTOE in 2030, with an average annual growth rate of 3.2% and will be met by oil imports¹⁷⁴. In the long term, the demand can even outstrip the supply, unless new plants or other alternative sources are developed in the medium to long term.

228. In terms of energy sources, the region is amply endowed with natural energy sources, coal, water and natural gas. Despite this endowment, the South Asian region relies heavily on imports, since it does not produce enough oil and gas to meet its own needs. The sky-rocketing oil prices however, puts severe strains on the resources of all South Asian Countries. If not addressed, this can in turn lead to serious economic implications (e.g. slowing down of economic development, increasing inflation, deepening poverty and causing political and social instability).

229. Lack of adequate and reliable energy is proving to be a major constraint to growth in production and productivity. Securing sustainable energy supplies to meet energy needs at reasonable prices has therefore become a major energy policy imperative of each country in the region. But since most of the South Asian countries are not able to generate sufficient electricity to meet their own domestic demands, there is great potential in energy trading and intensifying regional energy cooperation.

230. Complementarities abound not only in the diversity of resource endowment but also in the seasonal characteristic of supply and demand of electric power and geographical proximity of the demand centers. All these can be usefully integrated to benefit the participating countries of the region.

Purpose and Structure of the Chapter

231. The objective of this chapter is to (i) provide a brief overview of the South Asia energy sector and the potential for regional energy trade, and (ii) identify the binding constraints to regional energy trade.

¹⁷³ ADB. 2009. Energy Statistics in Asia and the Pacific (1990–2006).

¹⁷⁴ ADB. 2009. Energy Outlook for Asia and the Pacific.

232. This Chapter is organized as follows: **Section I** provides a brief Introduction, explaining the objectives and structure of the report and an overview of the South Asia Energy Sector; **Section II** provides a review on the benefits of energy trading and prospects for regional energy cooperation drawn from existing literature; **Section III** identifies the binding constraints to regional energy trade/cooperation. The final section gives concluding remarks.

Overview of the South Asia Energy Sector

233. The South Asia energy sector is diverse: on the one hand, there is India with a generation capacity that ranks as one of the highest in the world, while Bhutan and Maldives ranks one of the lowest; Coal is a dominant source of energy for India, while Nepal and Sri Lanka are heavily reliant on hydropower.

234. Despite the apparent diversity, Bhattacharyya (2006)¹⁷⁵ noted a number of similarities among the South Asian Countries:

- Per capita electricity consumption ranks very low by international standard.
- The level of electricity access is low, especially in rural areas, between 15 and 50%.
- Electricity is supplied to certain consumers at highly subsidized rates, often for political motivations, creating distortions in demand.
- The state budgetary support constituted the main source of funding for the sector for a long time. But deteriorating financial situation of the state does not allow continuation of the same practices, affecting growth of the sector.
- State still plays a dominant role in the electricity sector and often acts as the policy maker, regulator and owner of the electric utilities. In many cases, the state failed to exercise its power in a balanced manner.
- The level of private sector participation in generation is quite similar, between 20% and 30%, except in India where the official data shows an 11% share of private power (which excludes the captive power capacity that is owned by the private sector).
- Despite private entry in generation, vertically integrated operation remains most common form of market organization. Single buyer model is the reform model adopted in most of the countries of the region.
- The supply quality is poor, often as a result of inadequate supply capacity, poor maintenance and inappropriate policies.
- The electric utilities are in a state of severe financial distress due to poor tariffs, abysmal operating performance, and a legacy of inappropriate power procurement practices and policies.
- Each country is facing high demand growth due to relatively stronger economic performance in recent years.
- Each country has developed its own isolated system, and electricity trade plays a minor role in the region, although most of the countries share international boundaries with a neighbor.

235. Although the above similarities summarizes more or less, the problems of the region, the same similarities can help in finding common solutions to further improve the South Asian energy sector.

¹⁷⁵ Bhattacharyya, Subhes C. 2006. Power Sector Reform in South Asia: Why slow and limited so far?

236. An analysis of the regional power sector demand-supply gap is crucial in reaching any meaningful conclusion on the possibility and potentiality of cross-border power trade. What follows is an overview of the region's energy supply and demand situation.

Energy Supply

237. The South Asian region possesses a rich endowment of energy sources - water, forest, coal, oil and gas. Non-commercial energy sources, like animal waste, wood, crop residues, biomass and other traditional fuel sources, account for about 38 per cent of the region's total energy consumption.¹⁷⁶ The rest is covered by commercial energy¹⁷⁷.

238. A recent World bank study¹⁷⁸ estimated the total potential of South Asian countries (except Maldives) in terms of oil, gas, coal and hydropower vis-à-vis its current production (Table 3-1).

Table 3-1. Energy Resource Endowments of the South Asian Region

Country	Oil Reserves (Mt)	Oil Production (Mt/y)	Gas Reserves (bcm)	Gas Production (bcm/y)	Coal Reserves (Gt)	Coal Production (Gt/y)
Afghanistan	10-15/100	0.025	28.3/142	0.114	0.1	0.044
Bangladesh	7.8	0.34	580/810	13.8	2.2.	0
Bhutan	0	0	0	0	0	0
India	786	33	948	32.68	25/285	409
Nepal	0	0	0	0	modest	0
Pakistan	105	3.1	1300/5700	28	i85	3.3
Sri Lanka	14-18	0	0	0	0	0

Source: Potential and Prospects for Regional Energy Trade in South Asia

239. For hydropower, the same report shows that South Asia is only using up only 19.32% of its total (maximum unconstrained) potential (Table 3-2).

Table 3-2. South Asia Hydropower Potential and Development

Country	Hydropower Potential (MW)	Hydropower Developed (MW)	% Developed
Afghanistan	745	262	35.17%
Bangladesh	755	230	30.46%
Bhutan	23,760	468	1.97%
India	84,000	32,300	38.45%
Nepal	43,000	600	1.40%
Pakistan	54,000	6,500	12.04%
Sri Lanka	9,100	1,250	13.74%
Total	215,360	41,610	19.32%

Source: Potential and Prospects for Regional Energy Trade in South Asia

¹⁷⁶ Malla, Shanker Krisna. 2008. Towards a Regional Energy Market in South Asia. SACEPS Paper No. 16

¹⁷⁷ Commercial Energy is power used by commercial entities (e.g. Businesses like retail stores or auto dealerships), as opposed to residential, industrial, or transportation energy. This does not include non-commercial energy sources such as wood, animal waste, and other biomass. http://www.ehow.com/facts_6063049_definition-commercial-energy.html

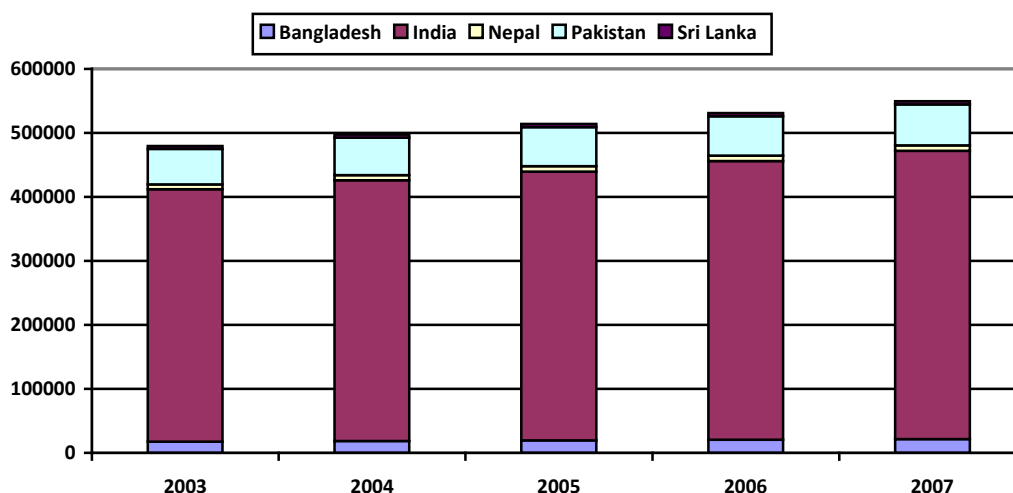
¹⁷⁸ World Bank-ESMAP. 2008. Potential and Prospects for Regional Energy Trade in the South Asia Region.

240. India and Pakistan account for the major share of natural gas and coal¹⁷⁹. However, these member states are also large in terms of area as well as population and thus, the higher resource base does not necessarily indicate sufficiency to meet their energy needs. Afghanistan, Maldives, Bhutan, Nepal and Sri Lanka (to some extent) are heavily dependent on imported petroleum products, while Bangladesh is heavily reliant on natural gas.

241. For renewable energy, while biomass meets a large portion of household energy demand across the region, the full potential of wind and solar energy has not been realized due to lack of requisite technological capacities, high capital cost of equipment and resulting high energy prices from these resources, and inadequate tariff incentives. Bhutan and Nepal, on the other hand, have hydropower potential in excess of their electric power demand over the foreseeable future but their full potential has yet to be tapped.

242. Figure 3-1 shows the energy production of five countries in South Asia from 2003-2007. Volume of production (ktoe) is mainly dominated by India.

Fig 3-1. Energy Production (kt of oil equivalent)

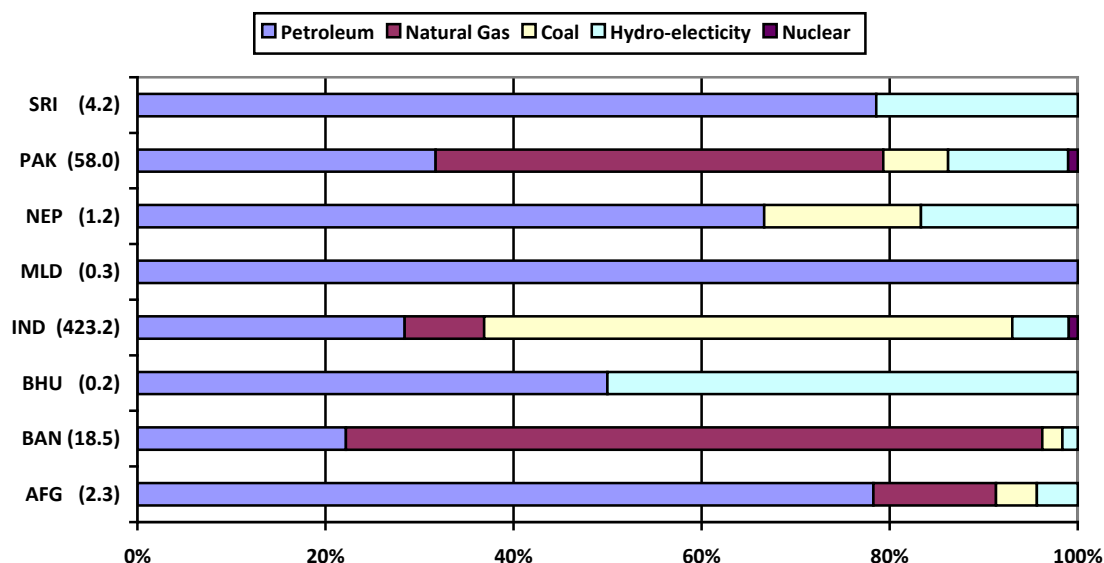


Source: World Development Indicators, 2010

243. In terms of energy supply mix, as of 2006, energy supply in the region is dominated by India with a commercial energy supply of 423.2 mtoe (Figure 3-2). This is broken down into coal (237.7 mtoe) and oil (120.3 mtoe). The three larger South Asian countries (India, Pakistan and Bangladesh) accounted for more than 98 per cent of the total energy supply of 507.9 mtoe in the South Asian countries.

¹⁷⁹ Fernando. P.N. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

Figure 3-2: South Asia Commercial Energy Supply Mix in 2006
(Figures in parenthesis are total mtoe supplied)



Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

Energy Demand¹⁸⁰

244. World Bank reported that the annual energy consumption among the South Asian countries are gradually increasing with growth rates ranging from 2.19% (Nepal) to 6.06% (India) during the period 2006-2007 (Table 3-3). This is equivalent to 9,554 kilo tons of oil equivalent (ktoe) and 594,913 ktoe respectively (Table 3-4).

Table 3-3. Energy use (Growth Rate)

Growth Rate	2005	2006	2007
Bangladesh	6.03%	3.09%	4.56%
India	3.40%	5.03%	6.05%
Nepal	3.36%	2.41%	2.19%
Pakistan	2.77%	4.20%	5.98%
Sri Lanka	2.31%	0.92%	2.20%

Source: World Development Indicators, 2010

Table 3-4. Energy use (kt of oil equivalent)

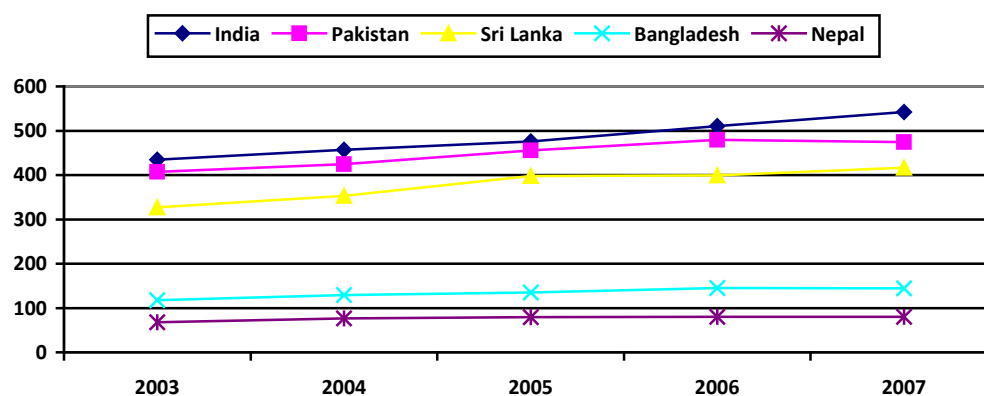
Energy Use	2005	2006	2007
Bangladesh	23,896	24,635	25,759
India	534,097	560,965	594,913
Nepal	9,129	9,349	9,554
Pakistan	75,406	78,570	83,271
Sri Lanka	9,001	9,084	9,284

Source: World Development Indicators, 2010

245. In terms of electric power consumption, the three larger South Asian countries India, Pakistan and Sri Lanka are considered heavy users with more than 400 kWh per capita in 2007 (Figure 3-3).

¹⁸⁰ No recent surveys have been done to measure the energy demand for the region, hence, demand herein refers to the actual or projected energy consumption.

Fig 3-3. Electric Power Consumption (kWh per capita)

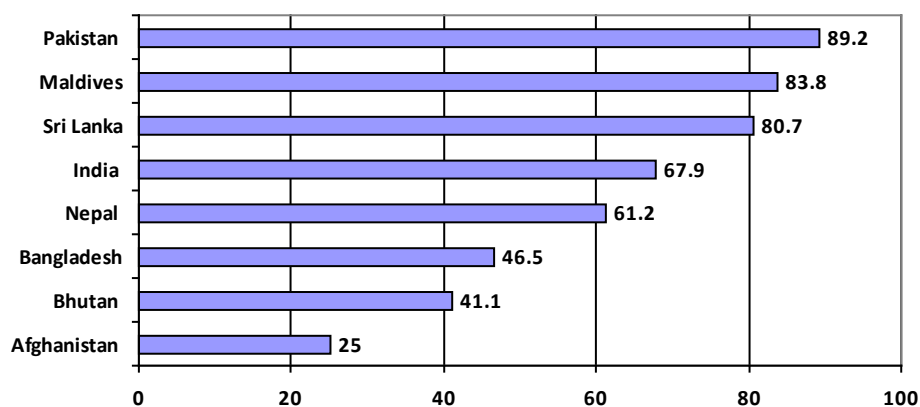


Source: World Development Indicators, 2010

246. Despite this growth in energy demand, however, South Asia continues to average among the lowest levels of per capita energy consumption in the world. Srivastava and Misra¹⁸¹ noted that the region's average per capita electricity consumption (in 2005) of 247kWh is far below the world average of 2465kWh (Human Development Report (HDR), 2005). Low utilization per capita, however, can be explained by the persistent shortage of energy as well as the low electrification rate.

247. In Nepal, Bangladesh, Bhutan and Afghanistan, a significant portion of the society still do not have access to modern sources of energy while Pakistan, India and Sri Lanka have more than 65% electrification rates (Figure 3-4). Low electrification can be attributed to both physical inaccessibility (poor quality and inadequacy of energy infrastructure) as well as affordability especially in the rural areas. Majority of the unserved population are in the rural areas and remote districts.

Figure 3-4. Household Electrification Rate, Latest Year (percent of households)



Source: ADB Key Indicators 2009

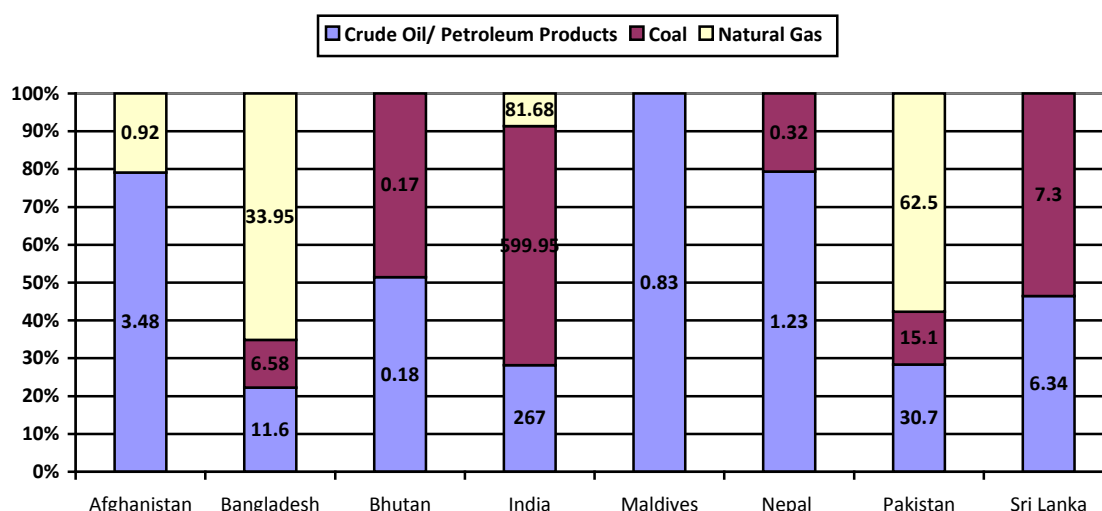
¹⁸¹ Srivastava, Leena and Misra, Neha. 2007. Promoting regional energy co-operation in South Asia.

Supply-Demand Projections

248. In its most recent report, ADB¹⁸² projects that South Asia's primary energy demand will increase from 582.1 MTOE in 2005 to 1,264.3 MTOE in 2030, with an average annual growth rate of 3.2% and that this growing demand will have to be met by imports. Oil import dependency, in particular, is expected to increase substantially, from 73.0% in 2005 to 90.9% in 2030.

249. A more optimistic view was reported by Fernando¹⁸³ with crude oil/petroleum growing at a compounded annual growth rate (CAGR) of 5.8%, 3.8% for coal and 6.34% for natural gas in the medium to long term (2010-2020) (Figure 3-5, details appended as Annex 3-1). Volume-wise, the supply is assumed to be still dominated by crude oil/petroleum products, except for Bhutan and India which is dominated by coal.

Figure 3-5. Projected Commercial Energy Supply Mix, 2020 (%)



Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

250. On the other hand, energy demand in the region is expected to grow at a CAGR of 5% with natural gas expected to register a growth rate of 6.3% followed by crude oil and coal. Electricity demand is expected to have a CAGR of around 9%¹⁸⁴.

251. Table 3-5 shows the projected total future commercial energy supply needed (other than from hydro and nuclear sources) as well as the projected future electricity generation demand.

¹⁸² ADB. 2009. ADB Outlook 2009.

¹⁸³ Fernando. P.N. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

¹⁸⁴ Fernando. P.N. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

Table 3-5. Total Projected Commercial Energy Supply and Demand

Countries/Year	Total Supply (MTOE)		Demand (MTOE)*	
	2010	2020**	2010	2020**
Afghanistan	1.90	4.40	0.10	0.34
Bangladesh	22.86	52.13	2.97	6.34
Bhutan	0.26	0.35	0.20	0.33
India	617.89	948.63	94.81	224.47
Maldives	0.50	0.83	0.17	0.22
Nepal	1.12	1.55	0.33	0.79
Pakistan	62.00	108.30	12.74	23.02
Sri Lanka	5.19	13.64	0.91	1.94
Total	711.72	1,129.83	112.22	257.44

*Converted from GHZ; **Estimated

Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

252. Although hydropower and nuclear power would continue to make substantial contributions to meet this electricity demand in India and in Pakistan, the bulk of that electricity demand will be met from coal, oil and natural gas based electricity generation. In India, the hydroelectricity contribution is estimated to grow from 130 billion kWh (31.2 mtoe) to 250 billion kWh (60.0 mtoe) over the period 2010 to 2020, while the corresponding figures for nuclear electricity contribution are 60 billion kWh (14.4 mtoe) and 160 billion kWh (38.4 mtoe). In Pakistan, the hydroelectricity contribution is estimated to grow from 130 billion kWh (31.2 mtoe) to 250 billion kWh (60.0 mtoe) over the period 2010 to 2020, while the corresponding figures for nuclear electricity contribution are 60 billion kWh (14.4 mtoe) and 160 billion kWh (38.4 mtoe).

253. The dependence on a single or few sources of energy renders the country vulnerable to seasonal availability of power as in the case of hydroelectric plants being more reliable during the rainy season. Oil/petroleum-based plants however are more prone to risks associated with the movement of international oil prices. The seasonality factor in both generation and demand is highly noticeable in the South Asian countries. Lama (2002)¹⁸⁵ highlights some of the seasonal characteristics of selected South Asian countries in Table 3-6.

Table 3-6. Seasonal features of Energy Supply and Demand in Some South Asia Countries

Country	Seasonality Feature
Bangladesh	During December-February, demand goes down and in March-May load shedding becomes a common feature. Even the day peak of the system cannot be maintained in this season. As a result industrial, commercial and agricultural activities suffer. During the monsoon period of June-August, agricultural pumping is not necessary. A full capacity of hydro generation is available during this period. Demand for electricity increases sharply during evening mainly because of typical evening shopping culture. This is a critical problem in the power system operation.
India	The peak months for hydro power generation are August-September while the lean remains from January to June. The thermal plants generation has been mostly designed to match and balance the trough months created by the hydro plants in winter and the pre-monsoon season.

¹⁸⁵ Lama, Mahendra, et. al. 2002. Reforms and Power Sector in South Asia: Scope and Challenges for Cross Border Trade.

Country	Seasonality Feature
Nepal	The peak demand of the Integrated Power System is usually during December-January and is minimum during the month of August. This is the period when generation from the hydro power-plants is low. Though, Feb-April is the driest period, the demand in these months are relatively lower. Since it is an integrated single system, the region-wise seasonality characteristic loses its identity as the interconnections transfer power from the surplus region to the deficit region. The supply capacity in turn is maximum during the wet months and minimum during the dry months of February/March. There is capacity surplus during wet months and capacity deficit during dry months (maximum during January).

Source: Reforms and Power Sector in South Asia: Scope and Challenges for Cross Border Trade.

254. Eventually, energy demand growth will far outstrip domestic supply, and in the foreseeable future, the demand–supply gap will become wider. The seasonality of domestic energy supply and demand has therefore rendered the sector vulnerable to seasonal deficits in supply and has prompted individual states to engage in imports. The same seasonality of supply surplus also encouraged energy abundant countries to engage in cross border power trading within the region as well as outside of it.

II. BENEFITS OF SOUTH ASIAN ENERGY TRADE AND PROSPECTS FOR REGIONAL ENERGY COOPERATION

255. The South Asian countries have strategic advantages that favor joint cooperation in regional development. These advantages include economic complementarities, geographical proximity, socio-cultural cohesiveness, lifestyle similarities, and lower transaction costs. This subregion is also strategically located for greater trade linkages with the member countries of the Association of South East Asian Nations (ASEAN) and China.

256. Geographically, all the countries of South Asia, with the exception of Sri Lanka and Maldives, are land locked or located in a single landmass which makes it economically possible to plan and develop integrated electric power infrastructure, including power grids and gas pipelines. This potential, however, can only be realized with improved security and regional cooperation, including at the ground level and with discernible benefits to the local populations.

Reasons for Energy Trade Failure and Prospects for Regional Trade

257. Similar to trade in goods and services, several reasons contribute to why the South Asian region lags behind in terms of energy trading and cooperation. The World Bank¹⁸⁶ highlights some of these reasons:

- Political tension between India and Pakistan over Kashmir, prolonged war conditions in Afghanistan, armed conflicts between Sri Lanka and Nepal, as well as the political turmoil in Bangladesh;
- The previous inward-looking, import-substitution-based policy regarded energy imports as diluting energy security;
- Lack of cross-border transmission links within the region and the with other regions-the war-damaged Afghanistan is a key transit country between Central Asia and South Asia;
- Poor operational efficiency and lack of creditworthiness (arising from inadequate tariffs, high system losses, and poor collections) of most power utilities in the region led to perception of high risks in terms of repayment; and
- Pervasive state ownership of the utilities, poor earnings, and inadequate internal cash generation to finance own domestic needs.

258. Notwithstanding this, the World Bank added that there are prospects for regional energy trade in the region.

259. At the regional level, there is increasing interest in discussing energy-related cooperation, cross-border energy investments and trade possibilities in various regional cooperation organizations, which is a good sign.

260. At the bilateral level, political tensions between India and Pakistan seem to be shrinking through a series of high-level talks and confidence-building measures. Internal conflicts in Nepal have subsided while situation in Afghanistan is still challenging.

261. At the government-level, the political mindset is veering away from inward-looking import substitution-based policies to liberalized trade and investment regimes resulting in a greater

¹⁸⁶ World Bank. 2008. Potential and Prospects for Regional Energy Trade in South Asia.

degree of global integration and increasing foreign exchange earnings and reserves, which, in turn, enable further liberalization.

262. National transmission companies in India, Pakistan, and Bangladesh are focusing attention to increased interregional transfer capacities giving exporters a substantially wider choice of buyers.

263. The private sector is also playing a greater role in the energy sector. The participation of Independent Power Producers has contributed significantly to the increase in supply of the power in the region.

264. The distribution segments in India, Pakistan, and Bangladesh are slowly being commercialized, through enterprise reform, privatization and through regulatory prodding (Box 3-1).

Box 3-1. Private Sector Participation in South Asia Energy Sector

- As of 2008, the private sector has a total generation capacity of nearly 24,000 MW (or about 16 percent of the total installed capacity) in the region.
- Distribution systems in Delhi, Orissa, Bombay, Calcutta, Surat, Ahmedabad, and Karachi are in the private sector or have recently been privatized.
- The tiny distribution system in the city of Ghazni in Afghanistan and the rural electric cooperatives in Bangladesh are both privately-owned
- The 400 kV transmission link between eastern and western regions of India (enabling the absorption of Bhutan power imports) has been constructed by a joint venture between a private investor and the Power Grid Corporation of India.
- There are more than 20 privately owned and licensed power-trading companies in India besides the PTC Limited.

Source: Potential and Prospects for Regional Energy Trade in South Asia, World Bank, 2008.

Sub-regional Trade

265. Despite the seeming complementarity in the supply and demand balance across South Asian countries as well as the potential for energy trade, energy trading in the region is still relatively low.

266. Bangladesh is endowed with natural gas reserves, but there is currently no cross-border pipeline or trade in natural gas since there is no inter or intra regional natural gas transmission infrastructure in place to facilitate gas imports, except for the LNG terminals in India satisfying domestic requirements.

267. There also exist trading in petroleum products between India and Nepal, Bhutan, Bangladesh and Sri Lanka but this is essentially based on India importing crude oil in excess of its own refining requirement to satisfy the petroleum product demand of Bhutan and Nepal, and partly that of Sri Lanka, using the excess refining capacity available in India.

268. India is also exporting diesel to Bangladesh and the governments of India and Nepal have recently agreed to proceed with the construction of about a 40 km long pipeline to

transport petroleum products from India to Nepal (about 20,000 barrels a day are sent at present by tanker).

269. In terms of cross-border electricity interconnections and electricity trade, there are some recent bilateral hydro-energy trade agreements transactions between Bhutan and India and between India and Nepal.

Bhutan-India

270. India has also had a long association in providing technical and financial assistance to Bhutan in the development of its hydropower resources. In 2006, the Government of India (GOI) and Royal Government of Bhutan (RGOB) signed an agreement to further facilitate the development and construction of hydro power projects in Bhutan and associated transmission systems through public as well as and private sector participation. Under the agreement, GOI has agreed to a minimum import of 10,000MW from Bhutan by the year 2020 from hydropower projects including Punatsangchhu-I (1095 MW), Punatsangchhu-II (1000 MW), Mangdechhu (720MW), and Wangchu (900 MW)¹⁸⁷.

271. In 2009, electricity exports from Bhutan to India amounted to 5,462 million kwh, which earned US\$ 220 million at an export price of about US cents 4 per kwh. Power was generated from three hydropower plants with total generating capacity of 1,416 MW, constructed with substantial grant assistance from India¹⁸⁸.

India-Nepal

272. India has been assisting Nepal in the development of its hydropower potential. Four hydroelectric schemes, namely Pokhara, Trisuli, Western Gandhak and Devighat, have been implemented in Nepal with financial and technical assistance of the Government of India (GoI).

273. The bilateral exchange of power at the borders between the two countries is presently at a level of 50MW. This is made possible by interconnections at the voltages of 11, 33 and 132 kV at 22 interconnection points. In 2009, Nepal imported 266.23 GWh (or 9.6 percent of its total supply) from India, and exported 101 GWh (or 5 percent of its total sales) to India.

274. Details of the other prospective bilateral energy agreements are attached as an Annex Table 3-4 to this report.

Inter-Regional Trade

275. Current inter regional energy trade between South Asia and the rest of the world covers petroleum, coal, and limited electricity trade. The latter can be due perhaps to lack of adequate infrastructure as well as political disputes. Some bilateral inter-regional trade transactions are identified in Table 3-6.

¹⁸⁷ Fernando. P.N. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

¹⁸⁸ World Bank. Potential and Prospects for Regional Energy Trade in the South Asia Region.

Table 3-6. South Asian Inter-Regional Trade

Country	Trade
Afghanistan	<ul style="list-style-type: none">• Afghanistan imported about 430 GWh (or about 28 percent of the total supply) from Iran, Turkmenistan, Uzbekistan, and Tajikistan.• Afghanistan imported about 100 MW of power from the Central Asian Republics (CARs)
Pakistan	<ul style="list-style-type: none">• Pakistan imported about 25 MW of power from Iran to the isolated grid of Baluchistan near Gwadar deep-seaport.

Source: Potential and Prospects for Regional Energy Trade in South Asia

Gains from Energy Trade in South Asia

276. The most obvious direct benefit from energy trade would be augmenting the energy requirements of the energy deficient country in the region on the one hand, and generating additional revenues for the exporting energy sufficient country on the other. Should this potential be realized, the benefits from an integrated energy market in South Asia can be enormous. Dasgupta (World Bank, 2010) estimates that potential total revenue from energy trading can amount to US\$12-15 billion annually.¹⁸⁹

277. The opening up of regional energy trade can also access markets outside of the region. In addition, transit countries would earn large fees, and grids could improve efficiency of supply and could attract private investment with better services, while potentially improving the environment. Pakistan and Afghanistan can play an important role as transit states for the rest of South Asia, as they provide the best route for access to and from Central Asia's energy¹⁹⁰.

278. So why energy trading? The World Bank¹⁹¹ offers the following reasons why trading becomes a logical and rational public policy choice for South Asia:

- There is mismatch between energy demand growth and energy resource endowments.
- Implications of trade to energy security. Reliance on energy trade for meeting a part of the domestic demand can actually enhance national energy security by diversifying energy forms and supply sources and lowering the cost of energy supply.
- The substantial benefits to the smaller exporting economies. Energy exports could make dramatically significant contribution to the GDP growth of economies like Bhutan and Nepal, and enable their export-led growth.
- The significant relief from energy constraints to rapid economic growth. This is especially true in the importing economies, India, Pakistan, and Afghanistan.
- The environmental imperatives. This is especially relevant for India, which relies heavily on domestic coal. Imported hydropower and natural gas would help in reducing carbon dioxide emissions from coal to some extent. This is also relevant to countries dependent on hydropower, in particular, in the management of regional water resources and the optimized use of other primary energy sources.
- Reduction in supply costs. Trade could reduce system development costs and enable lower-cost supply.
- Cash flow implications. Ideally, sound energy import options can improve cash flow and defray generation cost, savings of which can be used for other equally important investments.

¹⁸⁹ Dasgupta, Dipak, 2010. South Asia Economic Update 2010: Moving Up, Looking East. World Bank.

¹⁹⁰ Jacques, Isabelle. South Asia: What are the benefits of regional economic cooperation? 11 – 12 October 2004.

¹⁹¹ World Bank. Potential and Prospects for Regional Energy Trade in the South Asia Region.

279. Given these justifications, what can the South Asian region gain from energy trade?

280. According to Fernando¹⁹², regional energy trade projects would typically: (a) help overcome the mismatch between energy demand and energy resource endowments among the countries in the region, especially among neighboring countries; (b) enhance energy security through prudent reliance on trade to meet part of the demand by diversifying the energy forms and supply sources with possible lowering of the average cost of supply; (c) enable smaller countries with large natural resources (such as hydropower or natural gas) to develop that resource exploiting economies of scale; (d) help postpone, reduce, or avoid large and lumpy capital investments in new production facilities and thereby overcome temporal cash flow problems; (e) promote public-private partnership arrangements and thereby enhancing private sector participation in the energy sector; and (f) capture environmental benefits by enabling the substitution of a planned higher per electricity unit emission project in one power grid with a lower per electricity unit emission project in an interconnected power grid.

281. Lama et al (2002)¹⁹³ shares the same view and identifies the following gains from trade as follows: (a) Bridging of seasonality gaps, (b) Reduced cost per unit of electricity supplied and also reduction of system losses, (c) Accelerated availability of supplies to meet suppressed demand, (d) Availability of markets for otherwise surplus generating capacity and sharing of reserve generating capacity, (e) Improved system reliability and quality of supply, (f) Integrated transmission systems thereby reducing electricity supply costs, (g) Economies of scale in the larger generation units so that the member countries could meet aggregate peak demand with lower total capacity, and (h) Reduction of emission of air-pollutants if based on hydro-power.

282. The gains from energy trade in South Asia based on USAID's recent experience¹⁹⁴ are enumerated in Table 3-7.

Table 3-7. Gains from Energy Trade in South Asia: USAID Experience	
Category	Gains
Financial/Revenue Gains	<ul style="list-style-type: none">• Reduction of transmission and distribution losses by 90 MW, resulting in a saving of US\$79.12 million in investment for new capacity addition• Reduction of industrial production costs due to poor power quality estimated at US\$24.7 million annually• Reduction of US\$1 billion as a result of reduced power outages.• Revenue gains of US\$214 million annually for Bhutan, US\$ 308 million annually for Nepal and US\$130 million from Bangladesh

¹⁹² Fernando. P.N. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

¹⁹³ Lama, Mahendra, et. al. 2002. Reforms and Power Sector in South Asia : Scope and Challenges for Cross Border Trade.

¹⁹⁴ USAID. Economic and Social Benefits Analysis of Power Trade in the South Asia Growth Quadrangle Region

Category	Gains
Economic gains	<ul style="list-style-type: none"> • Increase in the power sector's projected share of GDP to about 2%, with annual growth rate of more than 9% for Bangladesh. • Annual growth rate of up to 8% for Nepal if hydropower is further developed. Hydropower revenue may grow from 11% to 36% of GDP for Bhutan • Foreign exchange gains - Power trading within the region would help reduce regional foreign exchange outflows, as availability of electricity would help reduce dependence on petroleum and petroleum products. • Employment – A new power plant could generate considerable additional employment particularly in rural areas where the plant is located, during construction as well as during operation of the plant. • Trade gains - Power trading would encourage trading in other commodities, changing the composition of the export baskets of power exporting countries and helping to address adverse balance of trade and balance of payment issues. The additional income from power exports and enhanced level of economic activity can be invested in social infrastructure. Customs revenue continues to be a significant share of total tax revenue. • Accessibility to electricity will boost agricultural productivity, triggering a range of off-farm activities. It would also slow rural to urban migration and reduce associated sociopolitical instability. Economic development and its attendant spinoff benefits, such as food security, better health, and improved literacy rates, would be additional gains. The sociopolitical instability, tension, and insurgencies that have plagued the region can largely be attributed to resource disparity, poverty, and economic inequalities. Regional inequalities and underdevelopment has been a major source of internal conflict. Improved electricity access would energize the entire socioeconomic process, mitigating regional disparities, reducing internal stress, and promoting better governance. Rural electrification accelerates economic development and creates markets, enhancing interaction between villagers and urban dwellers. This process also promotes new relationships between various ethnic groups and contributes to better social integration.

283. Despite these gains, some of which are potential and some have already been realized, there are still some constraints that hinder energy trading in the region.

III. BINDING CONSTRAINTS TO REGIONAL ENERGY TRADING

284. Energy trading in the region calls for establishment of appropriate energy infrastructure facilities across countries, mainly, high voltage interconnections between the national grids of the countries of the region. Such interconnections can improve the overall level of system reliability, efficiency and security of energy in the region, reduce cost through economies of scale, increase the diversification of primary energy resources, reduce costs of fuel transportation costs, and allow harnessing the regional resources more efficiently. Furthermore such a system will bring additional benefits in terms of environmental protection through reduced consumption of fossil fuels.

285. Some key challenges however, remain in the form of policy barriers, technical barriers, institutional barriers, commercial as well as financial barriers. The identification of these barriers and constraints will be most important in determining which barriers or constraints would demand more priority. Prioritization in turn can enable governments to respond accordingly, especially in cases where resources are limited.

286. For purposes of this report, a constraints framework for energy is developed to be able to pinpoint the binding constraints to energy trading in the region.

Energy Trade Constraints Framework

287. The South Asia power sector, as described by Lama¹⁹⁵, remained a state monopoly-respective governments owned, operated and regulated the power entities. This resulted in overlapping responsibilities and lack of accountability in terms of operational performance and service standards. Most of power generating units remained dependent on the subsidies and other inputs provided by the state and therefore, remained unexposed to any competitive and efficient atmosphere. The power distributing units lacked commercial independence and suffered from unclear definition of the corporate structure and responsibilities. Low tariff rates in relation to the financial requirements of the operating entities, high system losses and low collection from the consumers eventually led to payment defaults. The inadequate revenue flows therefore, could not cover even a reasonable share of investment costs as it has to meet both debt service and operation and maintenance (O&M) expenses. All these adversely affected investments in new capacity additions.

288. Against this backdrop, a framework is developed (based on the Hausmann, Rodrik and Velasco growth constraints framework¹⁹⁶) to determine the binding constraints to energy trading in the South Asian Region.

¹⁹⁵ Lama, Mahendra, et. al. 2002. Reforms and Power Sector in South Asia: Scope and Challenges for Cross Border Trade.

¹⁹⁶ Hausmann, R., D. Rodrik, and A. Velasco. 2005. Growth Diagnostics. Cambridge MA: John F. Kennedy School of Government, Harvard University.

Constraints Framework: Why is there Absence of Energy Trade in the South Asian Region?

Domestic/Subregional	Regional	Other
<p>Are domestic energy supplies/facilities adequate?</p> <p>Are there sufficient private sector investments?</p> <p>Are there low economic returns to private sector?</p> <p>Are the Social returns low?</p> <p>Are there geographical challenges?</p> <p>Is human capital inadequate?</p> <p>Is there sufficient public investment?</p> <p>Is the supporting infrastructure in place?</p> <p>Is there sufficient public investment?</p> <p>Is the private appropriability poor?</p> <p>Are incentives adequate?</p> <p>Is the cost of doing business high?</p> <p>Are there high taxes imposed?</p> <p>Is governance weak?</p> <p>Are the domestic regulatory frameworks conducive?</p> <p>Is there macro-economic, policy or political instability?</p> <p>Are there security risks and conflicts?</p> <p>Is there adequate access to financing?</p> <p>Are capital markets and banks adequate and developed?</p> <p>Are there adequate avenues for public/private dialogue?</p>	<p>Are the national policies/objectives aligned with each other to facilitate energy trade?</p> <p>Is there a strong collaboration among leaders and individual governments?</p> <p>Are there existing integrated master plans?</p> <p>Are there sufficient investments at the regional level?</p> <p>Are there adequate incentives for investments?</p> <p>Is there adequate access to regional financing?</p> <p>Is there support from regional/multilateral institutions?</p> <p>Are there geo-political conflicts/issues?</p> <p>Are the national infrastructure facilities complimentary, compatible are ready for connectivity?</p>	<p>Is there a Missing Market?</p> <p>Is there a common institution that can administer the missing market?</p> <p>Are the proper safeguards in place?</p>

Regional Energy Trade Constraints

289. The countries involved in energy trade projects often differ in economic status, energy production status, governance quality, institutional capacity, energy sector reform status, and legal and regulatory framework development. These differences make energy trade projects complex and difficult to implement.

290. The typical constraints encountered in promoting regional energy trade projects include: (a) inadequacy of domestic energy supply for energy trade; (b) inadequacy of private sector participation; (c) poor energy utility operational performance; (d) inadequacy of cross border energy trade infrastructure (absence of adequate physical interconnection infrastructure such as power lines and natural gas pipelines); (e) immaturity of domestic energy sector regulatory frameworks (absence of harmonization of standards, practices, grid codes, and regulatory arrangements); (f) inadequate access to finance and a reliable business environment (lack of adequate incentives and asset security for greater private sector participation as well as public private partnerships); (g) inadequate project information (lack of adequate information on timing, characteristics, and financing of proposed power generation projects as well as proposed power interconnections); (h) trade restraining country self sufficiency policy (countries regarding energy trade as an erosion of energy security); (i) inadequate public private dialogue; (j) weak lender collaboration; (k) incomplete energy system unbundling (absence of energy system unbundling to separate bulk transmission of power / natural gas and associated tariffs); (l) weak regional energy market; (m) geophysical conflicts and security risks (difficult transit country situations creating major risks to cross border energy trade); and (n) health and environmental safeguard requirements.¹⁹⁷

291. Based on a review of the energy trade sector, the following have been identified as binding constraints:

A. Binding constraints to energy trade

1. Inadequacy of Domestic Energy Supply for Energy Trade and Cost of Electricity

292. Feasible energy trade that can ease energy supply deficits in an energy receiving country has to be sourced from an energy surplus country and the lack of such a surplus would constrain that trade. This is a critical constraint, since it is clear from the growing volumes of inter regional energy imports to the South Asian countries (largely India), that the South Asian countries domestic energy supply is inadequate for domestic consumption, much less for intra regional energy trade beyond the limited level that is prevailing now.

293. It is relevant to state in the context of this constraint that although India with an installed power generating capacity of 141 GW in 2009 dominated the total South Asian countries installed power generating capacity of 171 GW, India itself experienced peak power supply deficits up to 16 per cent in 2009 due mainly to the need to de-rate the power generating capacity for various reasons including fuel supply shortages. Pakistan, Bangladesh and Nepal experienced worse situations. Substantial electricity export based on excess power generating capacity was therefore possible only from Bhutan to India.

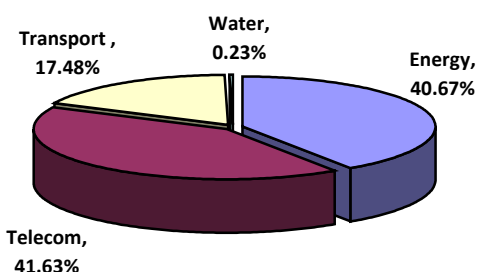
¹⁹⁷ Drawn from Fernando, P.N. 2010. Background Report on Regional Energy Trade Constraints and Policy Options Study. RSC - C00434 (REG): Regional Cooperation Strategy for South Asia. 15 July 2010.

2. Inadequacy of Private Sector Participation

294. As any increase in economic activity increases the demand for electricity, the sustained growth and development of the region will only bring about even higher requirements for electricity. Hence, if no additional capacities are created, then the inadequate supply of energy will hinder the region's further growth and development. Since public resources are usually limited the infusion of private funds to the energy sector would be crucial to arrest any future decline in growth and poverty reduction efforts.

295. In 2008, the World Bank reported that the region generated a total of US\$ 33 billion worth of private investments. Majority of the investments went to telecom and energy (42% and 41%, respectively) while the remaining investments went to transport (17%) and a very small proportion to water. (Figure 3-6)

Figure 3-6. Private Sector Investment in South Asia, 2008.



Source: World Development Indicators, 2010.

296. Notwithstanding this, however, the investments are still deemed insufficient to meet the region's energy requirements. Inadequacy of private sector participation particularly in export oriented power generation projects is a supply side constraint and typically arises from a poor enabling environment for private sector participation coupled with poor financial capacity on the demand side. This is a critical constraint as is evident from the lack of private sector participation so far in the major hydropower projects in Nepal and Bhutan. The 750 MW West Seti (storage) hydropower project in Nepal has been negotiated by the private sector for nearly a decade with no positive conclusion so far. This is partly due to the inherent complexities, including hydrological, environmental, and social issues that independent power producers face in the case of large size storage hydropower projects compared to large thermal power projects which are essentially fuel conversion projects carried out to provide specified electricity outputs with adherence to stipulated environmental norms.

297. On the other hand, the Chukha (336 MW) and Tala (1020 MW) run of river type hydropower projects in Bhutan were successfully implemented on a bilateral basis by India which provided 60 per cent grant and 40 per cent loan for the capital costs of these projects and purchases all the surplus electricity generated (in excess of the local consumption in Bhutan). This approach is likely to continue in the case of Bhutan given the multitude of run of river type hydropower projects available for development (in addition to storage type hydropower projects), the CDM benefits possible using India's carbon emission baseline, and the agreement by India to import a minimum of 10,000 MW from Bhutan by 2020. The power transmission that would be required is however becoming of interest to the Indian private sector.

3. Poor Energy Utility Operational Performance

298. Poor public power utility performance coupled with weak financial condition, constrains the power utility's ability to pursue public and/or public-private participation in incremental power generation as well as the ability to import power. An energy transfer project would not be financially viable if the targeted energy utility is unable to bear a regionally competitive price for the energy transferred.

299. Poor energy utility performance can be identified in the following instances:

- Power systems in the region operate in a supply constrained environment with a level of quality and reliability substantially lower than international utility standards.
- Load shedding and power outages are common during peak hours and during certain seasons of the year.
- Electricity utilities are used as vehicles of social policy and average tariffs are kept substantially lower than supply costs due to subsidies.
- Households and agricultural consumers are heavily cross-subsidized by industrial and commercial consumers, who pay a high price for a very poor quality of energy.
- Consequently theft of power and nonpayment are extensive and most utilities are not solvent enough to access commercial sources of funds except on the basis of expressed or implied sovereign guarantees.
- Nonpayment of electricity bills by government entities has also been a significant problem.

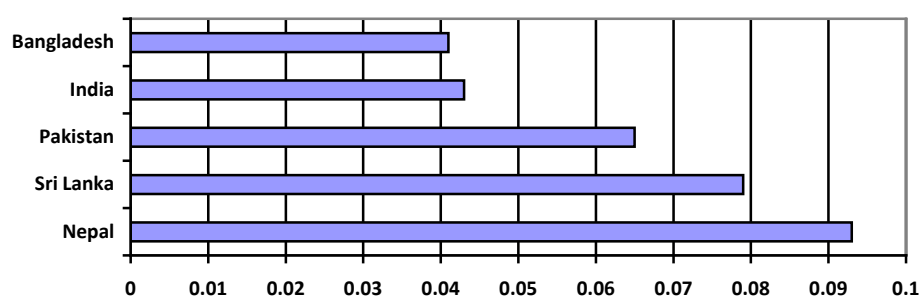
4. Inadequacy of Cross Border Energy Trade Infrastructure

300. Inadequacy of cross border energy trade infrastructure is a critical constraint. On the one hand, there is poor quality of the existing infrastructure and on the other, there is a seeming lack of investments, both public and private in cross border infrastructure.

301. Inadequate investment in cross border energy trade is largely due to inadequate export oriented energy provision capability on the part of the countries that have the resources to provide that energy as well as unrealistic energy price expectations on the part of prospective energy receiving countries where energy tariffs are often subsidized and held below economic costs.

302. A 2004 study noted that the consumers in Nepal were paying US\$ 0.093 per kwh, which was about 115% higher than tariffs in India and Bangladesh, 43% higher than tariffs in Pakistan and 18% higher than those in Sri Lanka (Figure 3-7). The higher tariff levels point to inefficiencies in the power sector.

Figure 3-7. Comparative Electricity Tariff in South Asia (\$/kWh, 2000)



Source: ADB. Nepal Critical Development Constraints.

303. Delays in negotiating the necessary energy transit agreements have also at times impeded the provision of cross border energy transfer infrastructure. The only substantial synchronized regional power interconnections at present are between Bhutan and India dedicated for the transmission of surplus hydropower generation in Bhutan to India. However, pre-feasibility studies have been completed for 500-1000 MW power interconnections between India and Sri Lanka and between India and Bangladesh. Inter government agreements have already been signed to carry feasibility studies for both of these interconnections and it is very likely that implementation of the India-Bangladesh power interconnection (Baharampore – Bheramara) will commence within a year given the urgent need to alleviate the severe power supply shortages that are prevailing in Bangladesh. A substantial power interconnection with a capacity of the order of 500 MW between Dinanath in Pakistan and Patti in the Indian Punjab is very likely to be technically and economically feasible given the competitive price at which electricity can be sourced through the open access Indian power system to Pakistan which is also continuing to experience acute power shortages. Successful implementation of the CASA 1000 project will also result in a power interconnection with a capacity of about 1000 MW between Afghanistan and Pakistan.

5. Immaturity of Domestic Energy Sector Regulatory Frameworks

304. Immaturity of regulatory frameworks in the individual countries and lack of harmony among the rules and procedures that are needed to facilitate cross border energy trade and simplify transaction mechanisms is a constraint to such energy trade. This is a critical constraint since there has to be harmonization of the domestic legal and regulatory frameworks of the energy trading countries at least to facilitate feasible electricity trade.

305. It is interesting to note that some institutional structures already exist in most South Asian countries in the form of the respective energy ministries and energy sub-sector institutions. This facilitates harmonizing of the relevant energy sector frameworks within the region. Some South Asian countries such as Pakistan, India, Sri Lanka and Bangladesh also have energy sector regulators. Such divergence in the mandate of regulators across the region can create coordination issues.

6. Inadequate Access to Finance and a Reliable Business Environment

306. Inadequate access to finance and a reliable business environment, which leads to a lack of private sector participation in the energy sector, is a constraint that arises largely due to shortcomings in the enabling framework for private sector participation in terms of stable procedures and valid agreements including those to enforce rule of law and security of assets. This is a critical constraint. The few export oriented projects implemented in Bhutan with Indian assistance have been done on a bilateral basis with limited commercial conditionality. Nepal and Bhutan have limited access to concessionary funds from multilateral agencies such as the World Bank and the Asian Development Bank for their major hydropower development because of limited allocations, prudent lending limits, and competing claims.

307. However, leveraging funds (both equity and loans) and guarantee operations to facilitate the financing of such hydropower development through the private sector are available from the private sector windows of these agencies. This underlines the importance of having in place the enabling framework to facilitate private sector participation including internationally accepted measures to ensure the security of energy sector infrastructure provided and agreements related to the provision of returns on those assets. Attracting private sector participation in large thermal power projects is less of a problem given the availability of proven project finance models for independent power production. Public sector funds for the separate power transmission components in cross border power

transmission power projects can normally be accessed from the World Bank or the Asian Development Bank given their technical, economic, financial, environmental and social acceptance.

7. Inadequacy of Project Development Information

308. The inadequacy of energy project development information in terms of the key technical, economic, environmental and social aspects as well as operational information on the prospective energy exporting and importing countries is a constraint on energy trade development. This is a critical constraint that can impede the carrying out of realistic long term generation and transmission planning and related energy flow analysis studies with and without country integration. These studies typically provide the basis for determining the technical feasibility of cross border energy transfers. A reliable data base is required to carry them out in a meaningful manner. Such a data base would typically include detailed information for the countries considered on energy demand projections, existing energy systems and operating details, possible energy supply expansion options together with their capital costs and financing mechanisms and operating details, in-country energy transfer options, cross border energy transfer options, integrated and non integrated energy system operating procedures, and environmental and social requirements.

B. A few non-binding constraints

1. Trade Restraining Country Self Sufficiency Policy

309. There has been a tendency in the past on the part of the South Asian countries to lay a strong focus on import substitution strategies viewing energy import as a form of compromising country energy security due to energy disruption fears and therefore limiting energy trade to the inevitable import levels of crude oil and petroleum products. However, this is NOT a critical constraint, since India, the largest regional energy consumer with abundant coal resources, has resorted to the large scale import of electricity, coal and LNG as essential energy sources since the early part of this decade, and the two other large South Asian countries, Pakistan and Bangladesh, have made firm commitments to import electricity and are now considering the import of LNG. While, Afghanistan and Nepal have depended on electricity imports over many years and are looking to significantly increase them, Sri Lanka has agreed to carry out a joint feasibility study with India on a 500-1000 MW power interconnection between the two countries and is also resorting to large scale imported coal fired power generation from 2011.

2. Inadequate Public Private Dialogue

310. Private sector companies interested in energy sector investments are mature and are not necessarily looking for extended dialogue. What is of more concern to the private sector is the availability of the enabling framework for secure power generation and transmission investments and related agreements to facilitate project finance arrangements. An important favorable aspect, in this context, is the countries involved being members of the Energy Charter Treaty (ECT). Therefore, inadequate public-private dialogue is NOT a critical constraint. Public-private participation is particularly useful in the case of large hydropower projects and cross border energy transmission projects given the need to obtain clearances with numerous public agencies. The dialogue necessary in this context will invariably take place and could be facilitated by the participation of a multilateral agency like the World Bank or the Asian Development Bank bringing in catalytic financing for the project and ensuring the security and international acceptability of the project finance structure involved.

3. Weak Lender Collaboration

311. Weakness in lender collaboration can result among commercial banks that syndicate in providing financing for an energy sector project together with international financing institutions (IFIs) and bilateral financing institutions. This is NOT a critical constraint due to the presence of the latter parties and the need for negotiating the legal documentation that would finally amalgamate all the lenders. The international financial institutions (IFIs) like the World Bank Group and the Asian Development Bank as well as bilateral development assistance programs of US, UK, Canada, Japan and Germany have been involved in the energy sector programs of South Asian countries for several decades and are well placed to undertake sector analysis in each country and identify electricity trade opportunities which would be attractive to the concerned South Asian countries, and persuade them to pursue these opportunities further. The IFIs are uniquely placed to play the part of honest broker and facilitate the parties to reach the initial inter-country agreements articulating the specific interest of the parties, constituting high level decision making bodies and working groups to carry out and review further detailed analytical and technical work to arrive at key decisions. The USAID SARI-E Program in South Asia has carried out a large number of studies to identify and analyze various electricity and gas trade opportunities and trade related issues in South Asia. The IFIs and bilateral financing institutions tend to carry out a major part of their work independently though in consultation with the South Asian countries concerned. They also collaborate with each other to the extent necessary and make available most of their findings.

4. Incomplete Energy System Unbundling

312. Separation of the energy transmission function from energy production and energy distribution and providing open access to the bulk energy transmission system has been clearly demonstrated to facilitate energy system operating accountability and provide better cost transparency in the case of both in-country and cross border energy transmission. This is NOT a critical constraint since such unbundling has been carried out in most of the South Asian countries in the case of the power sector. This has resulted in the power transmission system being separated from power generation and power distribution and also being given the single buyer responsibility for scheduling the purchase of both public sector and private sector power production in close coordination with the system control function to meet in-country power demand. This operation can in practice be extended to accommodate cross border power transfer as well with necessary improvements of the regulatory framework including adherence to the power system operating procedures called for.

5. Weak Regional Energy Market

313. Strong regional energy markets have been demonstrated to promote greater regional trade opportunities with the participation of many energy exporters / importers, but they have typically grown from relatively weak bilateral trade beginnings. So a weak regional energy market at the outset is NOT a critical constraint to regional energy transfer growth. This constraint will ease as bulk power generating capacity (and possibly natural gas availability) builds up to provide power energy export capacity and technically and financially viable cross border energy transmission develops. There is wide scope for development of the regional power market. The planned large scale importation of LNG to the region (mainly India) and expansion of the natural gas pipeline network in India will enable development of a regional natural gas market particularly between India, Pakistan (having one of the largest natural gas distribution systems in the World), and Bangladesh. The regional power network and the regional natural gas network that would ultimately emerge, with India carrying the backbone, will form the bases of the regional power and natural gas networks.

6. Geophysical Conflicts and Security Risks

314. Geophysical conflicts and security risks can be a constraint in many cross border transit situations. However, experience in Southeast Asia has demonstrated that cross border energy transfer projects continue to perform even under conflict and security risk situations given the economic benefits that accrue to the stakeholders. Continued electricity trade between Thailand and Laos which commenced as far back as the early 1970s is a good example. This constraint is NOT critical. The cross border power transmission projects between Nepal and India, Bhutan and India, Bangladesh and India, and Sri Lanka and India that have been identified for implementation are not constrained by geophysical conflicts and security risks. The proposed power interconnection between India and Pakistan though not yet in an advanced stage of development will also not encounter such a constraint. Afghanistan is a benefactor of the proposed The CASA 1000 power project from Tajikistan to Pakistan via Afghanistan and the proposed Turkmenistan-Afghanistan-Pakistan-India natural gas pipeline and it would be in Afghanistan's interest to satisfactorily manage any associated geophysical conflicts and security risks. The possible participation of IFIs in the financing of these projects would be a positive factor in this regard.

7. Health and Environmental Safeguard Requirements

315. The cross border energy trade projects identified for implementation as well as the additional hydropower and thermal power generation projects that would be required to bring in the additional electricity generation to support technically and economically viable cross border power transmission could have varying degrees of environmental impacts including health impacts that would need mitigation to ensure compliance with relevant country requirements. This is NOT a critical constraint. All the South Asian countries involved do have environmental compliance requirements which would ensure that these environmental impacts are within acceptable levels. The participation of IFIs in the financing of these projects would again be a positive factor in this regard.

IV. CONCLUSION

316. This chapter discussed the current situation of the energy sector in countries of South Asia, which highlighted the importance of regional energy trade as an instrument to meet the looming energy deficit, which can hold back growth and poverty reduction efforts in the region. A constraints framework helped to identify the binding constraints to regional energy trade and reveal those constraints, which may not pose as serious a barrier as the former.

317. Armed with better information on the identified binding constraints: (a) inadequacy of domestic energy supply for energy trade; (b) inadequacy of private sector participation; (c) poor energy utility operational performance; (d) inadequacy of cross-border energy trade infrastructure; (e) immaturity of domestic energy sector regulatory frameworks; (f) inadequate access to finance and a reliable business environment; and (g) inadequacy of project development information, policy makers have the basic information to map out an effective policy response to an emerging energy deficit.

Chapter 4

BINDING CONSTRAINTS TO CONNECTING SOUTH ASIA TRANSPORT CORRIDORS

I. INTRODUCTION

318. The transport sector broadly consists of private and public vehicles that move people and commodities from one physical location to another thru various modes - air, rail, water, and road. Transport plays a significant role in the overall development of a nation's economy as it allows producers to access the necessary inputs of raw materials, intermediate goods and other resources, and to transport final products to the markets. The more efficient the transport sector is, the greater the potential for productivity, trading and growth. By contrast, a less efficient transport system would adversely affect trade competitiveness in terms of higher production costs, higher delivery costs, longer transit times, and uncertainty in supply.

319. Although South Asia inherited an integrated transport infrastructure from the British, this infrastructure was fractured initially by the partition of India and subsequently by political differences among those countries within the region.¹⁹⁸ The current state of South Asia's transport system is characterized by a generally low level of infrastructure development compounded by limited interlinking of transport infrastructure with other countries within the region. On the one hand, there are countries like India and Pakistan, which possess the basic infrastructure and facilities to establish a mutually beneficial intra- and inter-regional transport system but have not exploited the initial endowment bestowed by the British to bring about greater intra-regional trade. On the other hand, there are countries like Afghanistan with a relatively lower level of infrastructure development which are currently in the process of rebuilding most of its transport infrastructure facilities but also face political tensions and problems. The fragmented nature of regional transport infrastructure has, thus, increased the cost of mobility of goods and people and undermined competitiveness and growth.

320. There is merit in integrating the transport networks within the region due to the geographical proximity of the countries. Strong and well-connected transport infrastructure is crucial for unlocking economies of scale and sharpening competitiveness, especially for the landlocked countries. The land-locked countries of Nepal and Bhutan, for example, would benefit in terms of increased accessibility and shorter transport and transit links within as well as outside of the region. Other countries would also benefit in terms of more efficient trading and faster passenger travel times.

321. Recognizing the importance of the linkages between countries, this chapter specifically focuses on the existing transport corridors in South Asian and the potentials for further corridor development giving emphasis on the removal of constraints to developing said corridors.

¹⁹⁸ Rahmathullah, M. 2006. Transport Issues and Integration in South Asia.

Transport Corridors

322. The World Bank¹⁹⁹ defines corridor both in terms of its physical and functional dimension.

323. Physically, a corridor is a collection of routes (includes one or more routes) that connect centers of economic activity (countries, activity centers or ports). While these routes have different alignments, they also have common transfer points and are connected to the same end points or gateways. Gateways allow traffic with sources or destinations outside the corridor (and its immediate hinterland) to enter or exit the corridor. Corridors are usually constructed from the existing transport routes of adjoining countries, many of which date back to ancient trading routes. Nearly all corridors however, evolved from existing land-based multimodal transport networks. Coastal and shortsea routes are less common but important for archipelagic countries, which would need efficient connections among the islands. Inland waterway transit (IWT) routes are less common although important in riverine countries like Bangladesh. Ocean and air routes are not usually included in the definition of the corridor because there is little need to develop the links on these routes. However, airports and seaports are included since they also serve as the international gateways. Transport corridors serve both passengers and freight traffic, but the characteristics of demand and the equipment used are different.

324. From an economic perspective, corridors promote both internal and external trade by providing more efficient transport and logistics services. It is not useful to make a distinction between “economic corridors” and “transport corridors” because most transport corridors are primarily developed to support regional economic growth. The primary reason for designating routes as part of a corridor is to focus attention on improving not only the routes but also the quality of transport and other logistic services in the corridor. Quality is measured in terms of transit time and cost of shipment of goods along the corridor. The reliability of a corridor is measured in terms of transit time and flexibility provided in terms of diversity of services offered on multimodal routes. Corridor efficiency therefore becomes important to achieve economic competitiveness.

325. While all corridors are nominally developed to support regional economic development, some corridors have been developed to promote economic activity along the corridor. Other corridors were developed to increase activity at the international gateway at the end of the corridor. In some cases, corridors have been created simply as a means to channel funds for infrastructure development to specific routes and to promote reforms of the regulations and procedures that restrict movement of goods along these routes.

326. Alternatively, a corridor may be developed to provide an international gateway for one or more landlocked countries. While there is usually substantial trade between the landlocked country and its neighbors, trade with third countries must often be conducted through intermediaries in neighboring countries that have access to the sea. Corridors are developed to allow the importers and exporters of landlocked countries to interact directly with the markets in which they trade and thereby reduce transaction costs. This was the rationale for the development of corridors such as the West Bengal Corridor in India and various corridors leading to and from Laos.

327. Still other corridors have been developed as part of a broader effort to develop an economic union or to expand an existing economic union. Finally, there are some corridors that have evolved with no objective other than to facilitate bilateral trade and multi-country trade that is controlled through back-to-back agreements. They are not intended to develop regional routes or to facilitate extra-regional trade.

¹⁹⁹ World Bank. 2005. Best Practices in Corridor Management. Washington DC.

Structure of the Chapter

328. This Chapter is organized as follows. After a brief Introduction (**Section I**), **Section II** provides a brief overview of the transport sector and transport corridors in the region and the potentials for integration and cooperation. **Section III** will attempt to identify some of the constraints to efficient corridor traffic while the final section, **Section IV** will provide some concluding remarks and some possible strategies to minimize hurdles to efficient traffic corridors.

II. OVERVIEW OF THE SOUTH ASIAN TRANSPORT SECTOR AND TRANSPORT CORRIDORS

Roads

329. South Asia has a total of 3.98 million kilometers road network (Table 4-1). Bangladesh, India and Pakistan have relatively more extensive road networks in the region with India having about 84% of the total roads. The more mountainous countries, Afghanistan, Bhutan and Nepal, have limited road networks. Although India has the longest road network, less than half (47.4%) is considered paved in contrast to Sri Lanka which has 81% paved roads of its total 97,286 km total road network and Maldives (including village roads that are made of compacted coral and is considered as paved). Bangladesh ranks lowest in terms of percentage of paved roads (9.5%) followed by Afghanistan (29.3%). In terms of road density, India remains to have the highest road density in the region.

Table 4-1. South Asia Road Network Summary

Country	Total Road Network (Km)	Paved (% to Total)	Density (km of road per sq. km of land area)	Year Reported
Afghanistan	42,150	29.30	6.06	2006
Bangladesh	239,226	9.50	166.00	2003
Bhutan	8,050	62.00	17.00	2003
India	3,316,452	47.40	1,001.00	2007
Maldives	88	100.00	0.29	2009
Nepal	17,280	56.88	12.00	2004
Pakistan	260,420	65.36	33.78	2006
Sri Lanka	97,286	81.00	148.00	2003
Total	3,980,864	46.99	0.83	

Source: World Development Indicators, September 2010 and CIA World Factbook.

330. In terms of road corridors, the SAARC identified 18 key road corridors in the region, 11 of which, measuring a total of 15,790 km²⁰⁰, are deemed to be of greater regional significance (Table 4-2). The details of these road corridors are attached as Annex 4-1.

Table 4-2. South Asia Road Corridors

Road Corridor	Length (km)
Kabul–Lahore–New Delhi–Kolkata–Petrapole/Benapole–Dhaka–Akhaury/ Agartala	3262
Kathmandu – Birgunj - Kolkata/Haldia	1,323
Thimpu – Phuentsholing – Jaigon - Kolkata/Haldia	1,039
Kathmandu – Kakarvitta – Phulbari – Banglabandha – Mongla or Chittagong	1,314
Samdrup Jonghar – Shillong – Sylhet – Dhaka – Kolkata	1394
Agartala – Akhaury - Chittagong	906
Kathmandu – Nepalganj – New Delhi – Lahore – Karachi	227
Thimpu – Phuentsholing – Jaigon – Burimari – Chittagong or Mongla	2,643
Shibganj – Jamuna Bridge	966
Kathmandu – Bhairahawa – Sunauli – Lucknow	880
Kandahar – Speenboldak – Chaman – Quetta – Karachi	252
TOTAL 11 Road Corridors	15,790

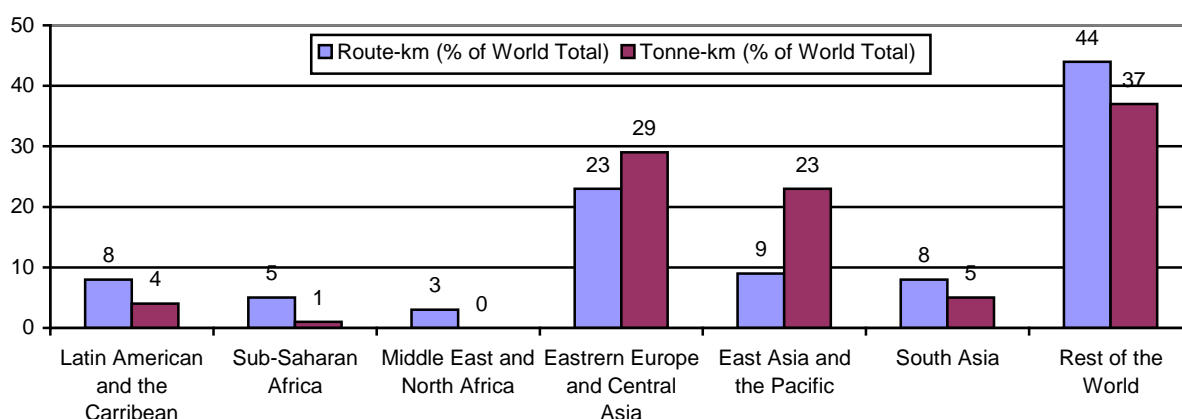
²⁰⁰ Rayner, Nigel. 2010. Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector. Background Report for ADB RSC-C00602 (REG).

Rails

331. The existing railway network in the region was inherited from the pre-independence railway system that covered the sub-continent with some of the original natural links severed. At present, only four of the eight countries in South Asia have railway facilities: Bangladesh, India, Pakistan and Sri Lanka. Afghanistan, Bhutan, Maldives and Nepal have no domestic rail networks, however, both Afghanistan and Nepal have short spur rail lines which link with railways across the borders to railways in neighboring countries: Afghanistan with railways in Turkmenistan and Uzbekistan and Nepal with India (Indian Railways).²⁰¹

332. Notwithstanding this, South Asia's rail network accounts for 8% of the total world network as of 2005 and 5% of the total world rail freight traffic (Figure 4-1).²⁰²

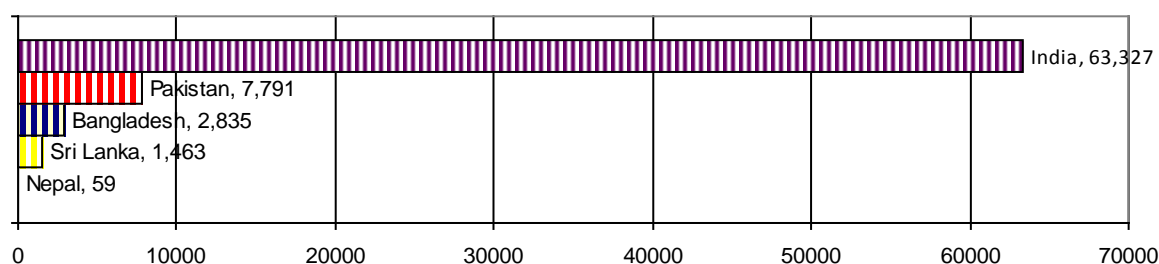
Figure 4-1. Distribution of world railway network and freight traffic by region



Source: Freight Transport for Development Toolkit-Rail Freight. World Bank.

333. As of 2008, South Asia's total railway network measured 75,416 kilometers. Sri Lanka has the shortest with just 1,463 kilometers, Bangladesh is almost twice longer, while Pakistan rail covers almost thrice as that of Bangladesh. India, makes up for about 84% of the total rail network. (Figure 4-2).

Figure 4-2. South Asia Rail Network (km), 2008



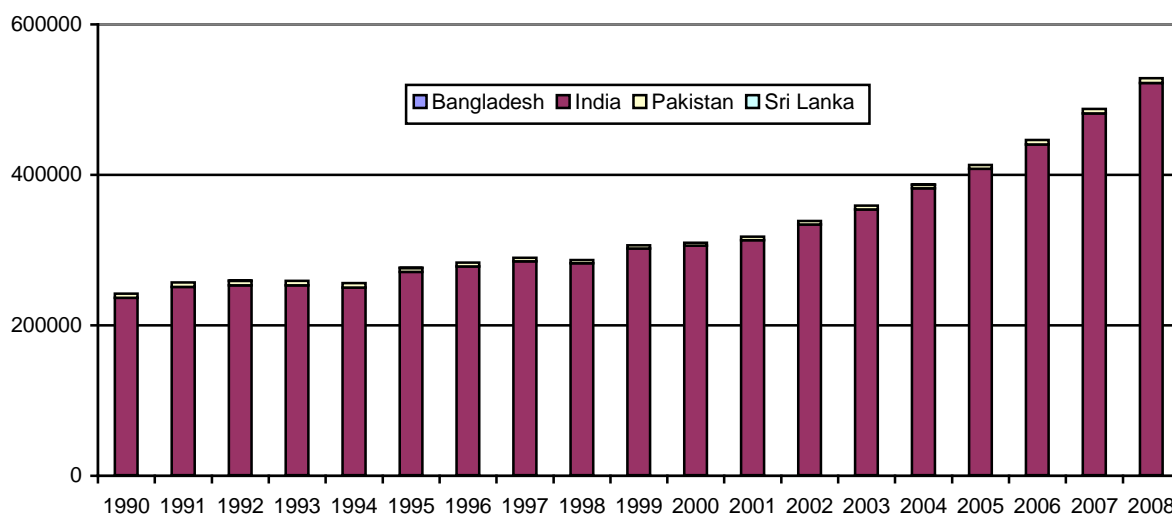
Source: ADB Key Indicators for Asia and the Pacific 2010 and CIA World Factbook. September 2010.

334. In terms of freight, a total of 528,563 million ton-km of goods were transported in the region with India accounting for more than 98% of the total goods transported (Figure 4-3). The remaining goods equivalent to less than 2% is shared by Pakistan, Bangladesh and Sri Lanka.

²⁰¹ World Bank. 2008. Trade and Transport Facilitation in South Asia, Systems in Transition. Volume II: Annexes.

²⁰² Amos, Paul. 2009. Freight Transport for Development Toolkit-Rail Freight. World Bank.

Figure 4-3. Railways, goods transported (million ton-km)



Source: World Development Indicators, September 2010

335. South Asian railways are generally publicly owned and operated and hence subject to resource constraints. As rail can play a much greater role in trade-transport in the region, major improvements in management and infusion of investment would be necessary.

336. There were fifteen (15) existing and potential rail corridors in the region, but only five (5) rail corridors²⁰³ with a total length of 6,567 kilometers are of key importance (Table 4-3). The details of these rail corridors are attached as an Annex 4-2.

Table 4-3 South Asian Rail Corridors

Corridor	Length (km)
Lahore (Pakistan) – Delhi/Kolkata (India) – Dhaka (Bangladesh) – Imphal (India)	2,830
Karachi (Pakistan) – Khokhrapar – Munaboia – Jodhpur (India)	707
Birgunj (Nepal) – Raxaul – Kolkata (804 kms) or Haldia (India)	832
Birgunj (Nepal) – Katihar- Chittagong Port (Bangladesh)	1,146
Colombo (Sri Lanka) – Chennai (India)	1,052
Total	6,567

Waterways and Ports

337. Bounded by the Bay of Bengal and Arabian Sea, the South Asia is endowed with a long coastline of 12,000 kilometers with extremely high population density along the coast²⁰⁴ and 24,230 kilometers of waterways²⁰⁵ providing the region with an alternative mode of transport for both passenger and goods. These gateways not only serve the maritime transport needs of the countries in which they are located but also provide services for the landlocked countries of South Asia, namely Nepal, Bhutan and Afghanistan. The region also has a total of 17 major ports as of 2009 and 611 merchant marine vessels (Table 4-4).²⁰⁶

²⁰³ Rayner, Nigel. 2010. Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector. Background Report for ADB RSC-C00602 (REG).

²⁰⁴ Coastal and Marine Risk Mitigation Plan for South Asia - Proceedings of SAARC Regional Workshop. 2008.

²⁰⁵ CIA. The World Factbook. September 2010.

²⁰⁶ CIA Factbook defines merchant marine as all ships engaged in the carriage of goods; or all commercial vessels (as opposed to all nonmilitary ships), which excludes tugs, fishing vessels, offshore oil rigs, etc.

Table 4-4. South Asia Waterways and Ports Sector

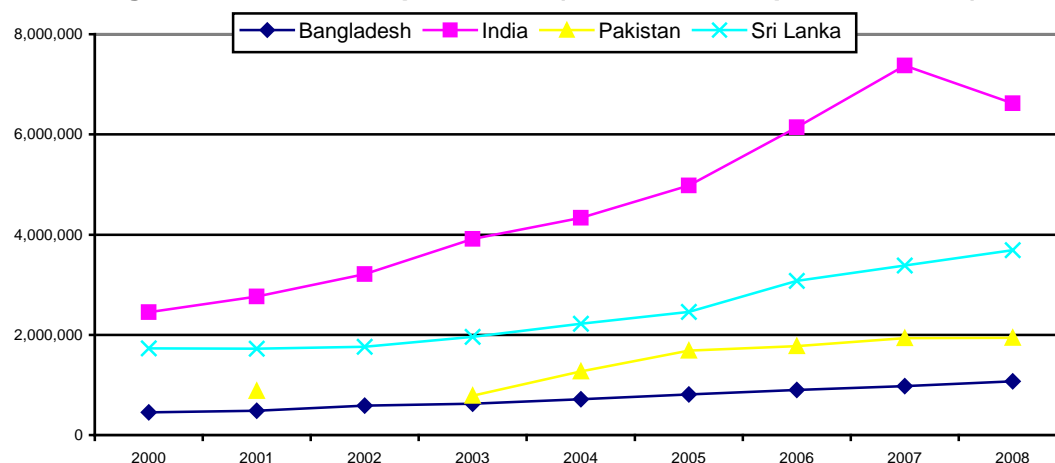
Country	Waterways (km)	Merchant Marine	Major Ports
Afghanistan	1,200	-	Kheyraabad, Shir Khan
Bangladesh	8,370	40	Chittagong, Mongla Port
Bhutan	-	-	-
India	14,500	501	Chennai, Haldia, Jawaharal Nehru, Kandla, Kolkata (Calcutta), Mormugao, Mumbai (Bombay), New Mangalore, Vishakhapatnam
Maldives	-	29	Male
Nepal	-	-	-
Pakistan	-	15	Karachi, Port Muhammad Bin Qasim
Sri Lanka	160	26	Colombo
Total	24,230	611	17 major ports

Source: The World Factbook, CIA. September 2010.

338. Most of the busy ports in South Asia have been partly privatized like Jawarlal Nehru (in India), Karachi (in Pakistan), Colombo (in Sri Lanka) resulting in higher efficiency in operation. In fact, several ports in India, Pakistan and Bangladesh are among the top world ports in terms of total cargo volume and container traffic based on the 2008 World Port Rankings.²⁰⁷ In addition the port of Colombo serves as a major trans-shipment hub for container services to/from other ports in South Asia.

339. In terms of container port traffic, South Asia registered a total of 13.32 million TEU in 2008, equivalent to about 2.74% of the total world container port traffic.²⁰⁸ India accounted for almost half of the regional port traffic (49.7%) followed by Sri-Lanka (27.7%), Pakistan (14.6%) and Bangladesh (8%) (Fig 4-4).

Figure 4-4. Container port traffic (TEU: 20 foot equivalent units)



Source: World Development Indicators, September 2010

340. Inland, there are two important inland water transport (IWT) routes namely, the Kolkata-Haldia-Mongla-Barisal-Narayanganj-Sirajganj-Chilmari-Pandu (1,439 kilometers) and the Kolkata-Haldia-Mongla-Barisal-Narayanganj-Bhairababbazar-Markuli-Fenchugan-Karimganj (1,318 kilometers) having a combined length of 2,757 kilometers.²⁰⁹ The details of these inland waterways are attached as Annex 4-3.

²⁰⁷ <http://aapa.files.cms-plus.com/Statistics/WORLD%20PORT%20RANKINGS%2020081.pdf> by the American Association of Port Authorities.

²⁰⁸ World Development Indicators, 2010.

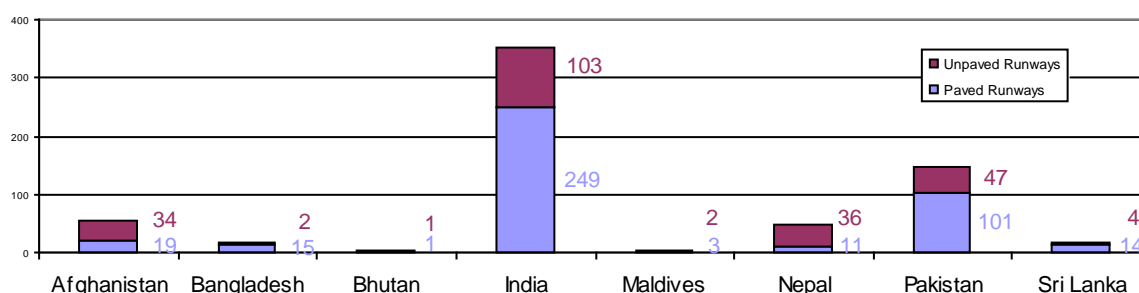
²⁰⁹ Rayner, Nigel. 2010. Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector. Background Report for ADB RSC-C00602 (REG).

Air Transport

341. Civil aviation in South Asia has continued to grow rapidly in recent years, although this growth has not been spread equally among the countries of the region. Much of the growth in civil aviation in South Asia in the past decade has been in the domestic market in India. This growth has likewise stimulated spillovers to other countries within the region.

342. As of 2010, South Asia has a total of 642 airports, 413 of which (64%) have paved runways.²¹⁰ More than half of the total (55%) is located in India, and almost a quarter (23%) in Pakistan. The rest is shared by other countries in the region (Figure 4-5)

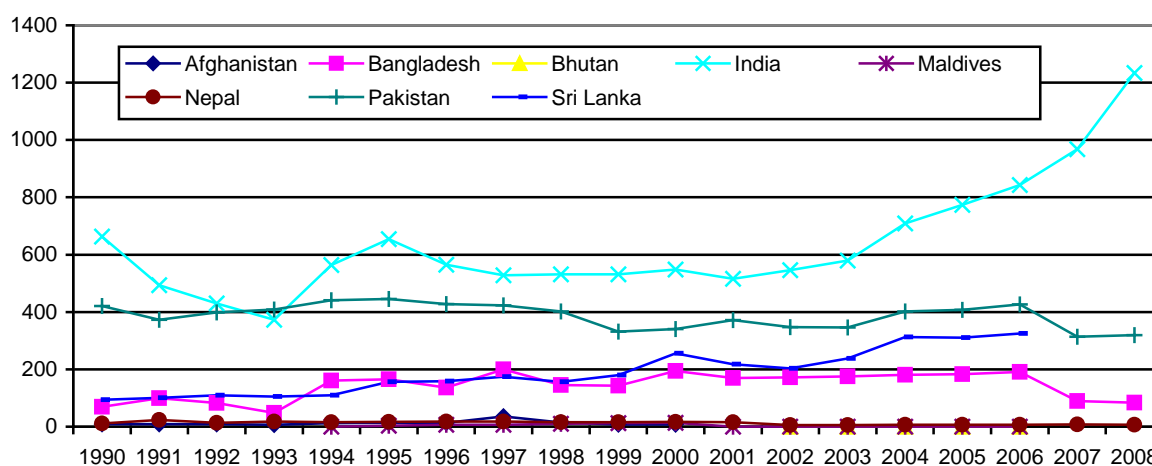
Fig.4-5. South Asia Airports, 2010.



Source: The World Factbook, CIA. 2010.

343. In terms of air freight, South Asia registered some 1.8 million ton-km in 2006. India accounted for about half (47%) of the total air freight in the region, followed by Pakistan (24%), Sri Lanka (18%) and Bangladesh (10%) (Figure 4-6). Globally, air freight is about one percent of total international trade tonnage, but 35 – 40 percent of the total value of international trade.²¹¹

Figure 4-6. South Asia Freight-Air Transport (million ton-km)



Source: World Development Indicators, September 2010.

344. Most air freight in the South Asia region is carried in the belly of passenger flights. Accordingly, the pattern of available air freight linkages is essentially the same as for passenger travel, although there are some dedicated air cargo flights operated, particularly between Sri Lanka and Maldives.

²¹⁰ CIA. The World Factbook. Accessed September 2010.

²¹¹ World Bank. 2008. Trade and Transport Facilitation In South Asia-Systems in Transition, Vol. 1.

III. CONSTRAINTS TO EFFICIENT CORRIDOR TRAFFIC

345. Inefficient transport corridor facilities (e.g. narrow and congested access roads) increase the time for border crossing. The more time consuming and costly it is to move goods from one place to the other, the more difficult it is for producers and traders to be competitive and to reach international markets, hence the need to reduce time and cost of transport. A case in point, a container can take as many as 35 days to move from New Delhi to Dhaka because the maritime route is via Bombay and Singapore/Colombo to Chittagong Port and then by rail to Dhaka. The same container can reach Dhaka in 5 days if direct rail connectivity exists between New Delhi and Dhaka. Similarly, a container is required to travel 7,162 kilometers from Dhaka to Lahore by sea instead of only 2,300 kilometers by land simply because overland transport across India is not allowed.²¹² Some of the other examples of road-related border crossing are as follows:

- Restrictions on transit facilities: India does not allow Pakistan transit to Bangladesh and Nepal; whereas while Pakistan allows transit to Afghanistan to trade with India, it has restricted India from crossing its borders;²¹³
- Road protocols do not permit trucks from the importing country to travel within the host country's borders requiring offloading and on-loading of trucks at the border, e.g., India and Bangladesh²¹⁴; India and Pakistan;²¹⁵
- Trade between India and Pakistan is restricted only to one road route, that is, through Pakistan's Wagah border with India;²¹⁶
- The Pakistan-India 1974 Protocol of Maritime Trade does not allow third country vessels to lift India-Pakistan-bound cargo.²¹⁷

346. There are also problems with customs clearance centers that are located far away from border-crossing facilities. The sanitary and phytosanitary testing laboratory in Kolkata is 1,000 kilometers away from the customs facility at Birgunj, Nepal. Exporters pay additional fees for vehicle detention charges for weeks while waiting for test results²¹⁸, which raise the costs and affects the quality of the export products. In India, testing laboratories are at large distances from the port of entry.²¹⁹

347. On the other hand, non-cooperation among South Asian countries have caused individual countries to seek partnership elsewhere, developing linkages outside of the region which can translate to opportunity costs. For example, Pakistan's non-adherence to overland trade between India and Afghanistan has led to the development of a transport corridor from India to Afghanistan and Central Asia through the port of Chaubahar, Iran. Lack of transport

²¹² Rahmathullah, M. 2006. Transport Issues and Integration in South Asia .

²¹³ Taneja, N. 2007, "Trade possibilities and non-tariff barriers to Indo-Pak trade," Working Papers 200, Indian Council for Research on International Economic Relations, New Delhi.

²¹⁴ Banerjee, P. and J. Roy, 2010, Connecting South Asia: the centrality of trade facilitation for economic cooperation, Washington DC: The World Bank.

²¹⁵ Taneja, N. 2007, "Trade possibilities and non-tariff barriers to Indo-Pak trade," Working Papers 200, Indian Council for Research on International Economic Relations, New Delhi.

²¹⁶ Taneja, N. 2007, "Trade possibilities and non-tariff barriers to Indo-Pak trade," Working Papers 200, Indian Council for Research on International Economic Relations, New Delhi.

²¹⁷ Taneja, N., 2006, "India-Pakistan Trade," Working Papers 182, Indian Council for Research on International Economic Relations, New Delhi.

²¹⁸ Karmachaya, B. 2002, "Facilitating trade in SASEC region in the perspective of recent developments: case study of India and Nepal," paper presented at the South Asia Business Forum, South Asia Sub-Regional Economic Cooperation, New Delhi, August. Quoted by Arnold and Ostuki (2007).

²¹⁹ Kardar, Shahid. 2010. South Asia-Intra Regional Cooperation: The Way Forward (Draft Report May 2010).

cooperation between India and Bangladesh also gave rise to the “Kaladan Project, linking Sittwe Port, Myanmar to Mizoram, India, by land and by water.”²²⁰

Road Corridors

348. Road transport is the principal land freight mode and expansion in other modes of freight (i.e. rail, air and port) is both desirable and possible. The absolute importance of road transport however, is unlikely to diminish in the medium term.

349. Physically, while road corridors in South Asia currently provides connectivity between places along the corridor, there are specific sections in several corridors where the roads are reported to be in bad condition or too narrow. Although some sections are relatively shorter, delays still occur which increases transport costs. Many of the border crossing points located along the road corridors are reported to be badly congested, lacking in facilities and, in consequence inefficient. The most commonly reported shortfalls in this infrastructure for facilitation relates to space for vehicle unloading/loading, cargo inspection and parking while waiting for customs or other clearances. Axle-load limits and weight restrictions on some bridges are also a problem on certain road sections. Aside from the quality of the roads in the region, the unreliability of transport network due to lack of sufficient alternate routes also affects the timely movement of people and goods, and delivery of services. Investments in new roads are therefore necessary. These factors in addition to the natural terrain and landlocked nature of some countries like Nepal have led to increased cost of transportation in the country.

350. Politically, however, movement of trucks across international borders is constrained by the lack of cross-border agreements between countries e.g. Bangladesh-India and India-Pakistan. This leads to trans-shipment of cargoes at the border which effectively increases the cost of transport and ultimately, the cost of goods.

Rail Corridors

351. The ability of trains to move goods more cost effectively also suggests a potential for further investments in the sector. But while there is great potential for this alternative regional surface transport, such potential is constrained by issues related to different gauges, incompatible rolling stocks, capacity constraints, load restrictions, changes in traction and missing sections of rail links. There is also a seeming absence of a multilateral agreement which would allow direct intra-regional movement.²²¹ any rail projects are currently under consideration as part of each countries national railway development plans. However, some of the investments necessary to enhance regional connectivity may not be regarded as high priorities for national development as they relate to short sections of track at the periphery of the national network.

352. Other investment requirements relate to track that is needed in order to enhance connectivity specifically in the context of border interchanges. These investments include enhancing capacity for the marshalling of freight trains at border crossings to reflect differences in operational capacities and practices in different national railway systems.

353. A further area of investment that needs to be considered in order to enhance regional railway connectivity relates to locomotives and rolling stock. Differences in the types of

²²⁰ Rahmathullah, M. 2006. Transport Issues and Integration in South Asia.

²²¹ Rahmathullah, M. 2006. Transport Issues and Integration in South Asia.

braking system used on freight wagons means that freight wagons cannot move onto the Indian railway system from either Pakistan or Bangladesh.

354. Non-physical barriers to greater regional rail connectivity stem largely from the restrictions imposed in the relevant bilateral agreements covering rail services on the types of wagons that can cross between countries. This has the effect of limiting the types of freight that can be carried on international rail services and, in particular, seriously limits the potential for the movement of containers by rail between India and both Pakistan and Bangladesh.

355. Differences in the operational practices of the different railway system also impose a non-physical barrier to rail connectivity. An example of this is the difference between the Indian practice of having 40 wagons in a rake and the Bangladesh practice of 30 wagons, with the result that rakes arriving from India must be marshaled into a new configuration before they can move over Bangladesh's railway system.

Inland Waterway Transport

356. Inland waterway transport is potentially a low cost and environmentally friendly mode of transport for bulk commodities that are not time sensitive. However, its use has declined in recent years.

357. It is clear that substantial capital investment would be needed to make inland waterway transport a more attractive option to potential shippers. Investment would be needed in the improvement of jetties and piers, and the provision of navigational aids, cargo handling and other equipment. There are no container handling facility for the inland water transport system. In addition, adequate funding would need to be allocated for regular maintenance dredging to address siltation and bank erosion to maintain appropriate navigation depths.

358. On the non-physical side, efforts would be needed to ensure that the relevant protocol covering the use of inland waterway transport for trade and transit will be renewed on a longer-term basis and in a timely fashion. While inland waterway transport might well be a suitable mode for carrying container traffic of certain sorts, the continuing requirement that certain goods can only be landed at the port of Chittagong severely limits the prospects for developing this traffic.

Maritime Gateways

359. Each of the maritime gateways in the region suffers from some form of physical barrier to efficient service, usually in the form of capacity constraints at berths or on the landside, depth limitations or insufficient cargo handling equipment. In terms of non-physical barriers, several ports suffer from poor management and some have a record of poor labor relations.

360. Probably the most important potential barrier to improving regional connectivity through maritime transport is the capacity of the port at Colombo. Over 70 percent of the container traffic through Colombo is transshipment traffic to or from other parts of South Asia, which means that the port fulfills a role that is very much a regional one rather than a primarily national one. This is a result of Colombo being conveniently located on main international shipping routes while most other South Asian maritime gateways would require significant extra sailing time to be accessed from mainline international shipping, and of

offering sufficient depth to enable fourth generation container vessels to berth, which is not the case at other regional ports.

361. There has been considerable development at the port in recent years, including the expansion of the three container terminals and investment in modern container handling equipment and computer systems. Despite this, the port is approaching capacity and further expansion is proposed under the Colombo Port Expansion Project, under which the breakwaters and basin will be expanded by the public sector and terminals and landside facilities expanded by the private sector under a PPP arrangement.

362. Timely completion of this project is essential if Colombo is to retain its role as a transshipment hub. Any decrease in the competitiveness of Colombo as a port relative to competing ports such as Singapore could see shipping lines moving their services away from Colombo, with a consequent increase in shipping costs not just for Sri Lankan traffic but for all South Asian container traffic that is currently transshipped through Colombo.²²²

363. An important non-physical barrier to regional maritime connectivity was the 1975 Protocol of Maritime Trade between Pakistan and India, which imposed restricted carriage of third country cargo on national vessels and restricted the carriage of bilateral cargo on vessels from a third country. As a result, much of the maritime trade between India and Pakistan was routed through a port in another country (often Dubai) and carried on vessels flagged in a third country. The consequences of this were that shipping times and costs were substantially increased and that third country ports and shipping lines picked up traffic that could have been handled by the two countries.²²³ The Protocol was revised in 2006 and many of these restrictions were removed. However, it the Protocol still maintains a system of giving preference to nationally flagged vessels.

364. India's prohibition on allowing third country trade moving between Nepal and Bangladesh from transiting through India forces Nepal to use the Indian ports of Kolkata or Haldia for its third country trade and denies it the opportunity to use the ports of Mongla or Chittagong in Bangladesh. A similar situation applies to Bhutan's third country trade, which also has to move through Kolkata or Haldia, both of which face capacity constraints.

²²² The SAARC study suggested that the port of Colombo could reach its capacity by 2010, in which case international services might abandon it in favor of Singapore or other competing ports. It may well be that the global economic slowdown that started in 2008 has helped the port of Colombo by reducing pressure on its current facilities and giving it time to advance the Colombo Port Expansion Project.

²²³ It has been estimated that routing through Dubai increased total shipping time for a container traveling between Karachi and Mumbai from 8.5 days to 13 days and the cost of transport from \$550 to \$750-950. (Source: "India-Pakistan Trade", N. Taneja, ICRIER Working Paper 182, New Delhi, India)

Port efficiency and logistics performance²²⁴

365. The growth of intra-regional trade in South Asian countries manifested through inter- and intra-regional trade will be adversely affected by inefficiencies in ports operation and transport logistics.

366. The growth in South Asia international container traffic over the last several decades has been significant, with the highest growth registered in Bangladesh and India. To handle the increasing container traffic improvements in ports efficiency and logistics will be necessary.

367. World trade is executed between countries by a network of increasingly global logistics operators. Technological progress and investment liberalization are presenting new opportunities for countries to harness global markets for growth and poverty reduction. But the ease with which traders can use this network to connect with international markets depends in large part on country-specific factors such as trade procedures, transport and telecommunications infrastructure, and the domestic market for support services. The case of transport logistics in India is perhaps illustrative of the state of logistics performance in South Asia (Box 4-1).

Box 4-1. Logistic Performance Index: Case of India

In India, an estimated 90% of warehousing space is of low quality with manual handling and basic equipment being the norm. Moving cargo by road – which accounts for an estimated 36% of logistics costs – is a similar story. The transport industry is highly fragmented and informal in nature with 74% of operators owning a single vehicle. This fragmentation and inefficiency is compounded by India's tax system. To avoid multiple taxation companies typically have warehousing operations in every state. The result is a large number of small warehouses across the country that lacks the latest warehousing processes and technologies and do not offer economies of scale. National highways form only 2% of India's road network, but they handle more than 40% of road freight traffic – which is 36% of total freight in all modes. This naturally leads to severe congestion and this is most acute closest to ports.

However, a World Bank Report highlights that despite all too visible inefficiencies in road infrastructure and the use of smaller and less powerful vehicles – Indian trucks travel at an average speed of 20 miles per hour versus 60 miles per hour in the developed world – India's surface transport sector cost is one of the lowest in the world. India's average cost per ton kilometer at \$0.019 to \$0.027 compares to China's \$0.04 to \$0.06.

Source: Bell, Rob. 2010. The World Bank Logistics Performance Index 2010 and Transformational Logistics. <http://www.thesupplychainlab.com/blog/featured-articles/the-world-bank-logistics-performance-index-2010-and-transformational-logistics/>

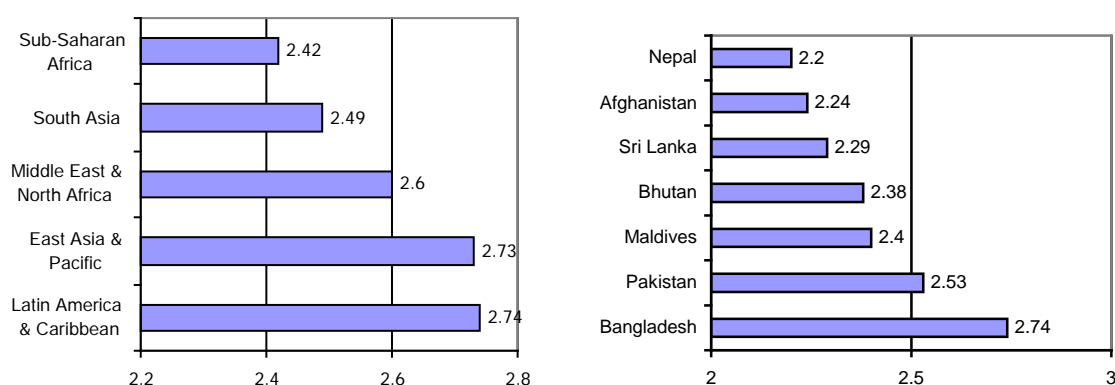
²²⁴ Logistics Performance Index (LPI) is a multidimensional assessment of logistics performance, rated on a scale from one (worst) to five (best) based on a worldwide survey of operators on the ground (global freight forwarders and express carriers), providing feedback on the logistics "friendliness" of the countries in which they operate and those with which they trade. It uses more than 5,000 individual country assessments made by nearly 1,000 international freight forwarders to compare the trade logistics profiles of 155 countries. Feedback from operators is supplemented with quantitative data on the performance of key components of the logistics chain in the country of work. The LPI focuses on six key dimensions: (1) Efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities) by border control agencies, including Customs; (2) Quality of trade and transport related infrastructure (e.g. ports, railroads, roads, information technology); (3) Ease of arranging competitively priced shipments; (4) Competence and quality of logistics services (e.g., transport operators, customs brokers); (5) Ability to track and trace consignments; and (6) Timeliness of shipments in reaching destination within the scheduled or expected delivery time.

368. With the advent of global supply chains, a new premium is being placed on being able to move goods rapidly, reliably, and cheaply. The ability to connect to the global logistics web depends on a country's infrastructure, service markets, and trade processes. This calls for closer cooperation between the government and the private sector and in the case of South Asia, also a closer coordination among countries.

369. Improving logistic performance has, therefore, become an important development policy because it encompasses an array of actions including performance of customs, trade-related infrastructure, inland transit, logistics services, information systems, and port efficiency. Weerahewa (2009) notes that the complexity of the trade procedures make it difficult to develop an indicator to measure logistic performance of a country because it is not easy to collect global basis information on these issues and it is not easy to aggregate inherent differences in the supply chain structure among countries. Nevertheless, the logistic performance index developed by the World Bank is the best measure so far in this regard. The Logistics Performance Index (LPI) and its component indicators provide a unique global point of reference to better understand these key dimensions of logistics performance.²²⁵

370. In its latest report, the World Bank's Logistic Performance Index 2010, South Asia was reported to have the second to the lowest LPI (followed by Sub-Saharan African region). According to the report, South Asia's port services are very inefficient, which pose a serious constraint to unlocking the region's vast trade and growth potential. At the sub-regional level, the LPI ranges from a low of 2.2 (Nepal) to a high of 3.12 (India). This explains why there is higher trade activity in the latter vis-à-vis other countries in the region (Figure 4-7).

Figure 4-7. International LPI, 2010 Major Regions and South Asian Countries

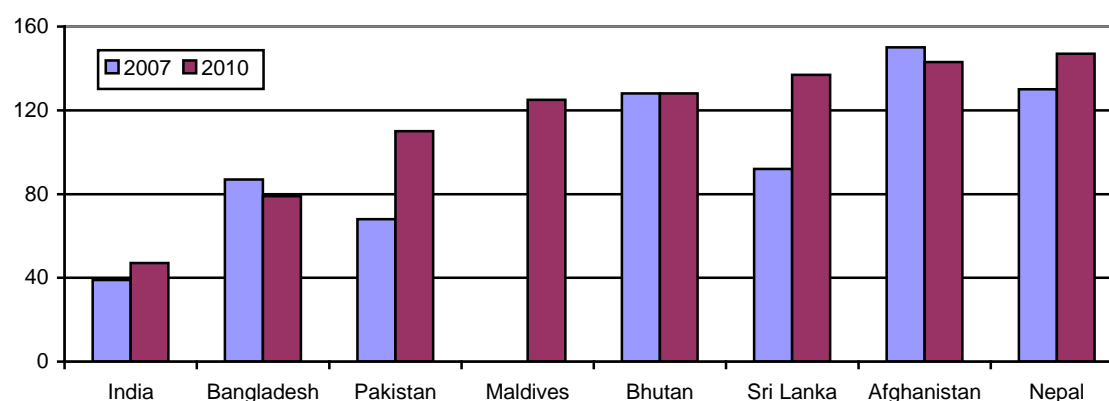


Source: World Bank LPI, 2010.

371. It is observed that while India continues to be the top performer in South Asia in terms of LPI, its survey ranking declined from 39 in 2007 (out of 150 countries) to 47 in 2010 (among 155 countries). Other backsliders in the region include: Nepal from 130 in 2007 to 147 in 2010; Pakistan from 68 in 2007 to 110 in 2010; Sri Lanka from 92 in 2007 to 137 in 2010. On the other hand, Bhutan maintained its rank at 128, while Afghanistan improved from rank 150 in 2007 to 143 in 2010 and Bangladesh from the 87th position in 2007 to 79th position in 2010 (Figure 4-8).

²²⁵ World Bank. 2010. Connecting to Compete 2010: Trade Logistics in the Global Economy.

Figure 4-8. LPI Comparative Rankings 2007 and 2010



Source: Connecting to Complete 2007 and 2010.

372. The importance of LPI has been documented in recent studies which link logistics performance with important economic indicators, such as level of trade integration. The study of Hoekman and Nicita²²⁶, for example, using a standard gravity model of international trade, showed that a higher LPI score is strongly associated with increased bilateral trade. In particular, the study revealed that increasing the LPI in low-income countries to the middle-income average would boost trade by about 15 percent.

373. On port efficiency, Wilson and Otsuki (2007) indicate that it takes only a couple of hours at the Port of Singapore or Laem Chaband in Thailand to clear a vessel. In contrast, it takes two-three days for ports in Bangladesh. It takes 30-35 days for goods shipped via container from the US west coast to Pakistan. Clark, Dollar and Micco (2004) find that improving port efficiency from 25 to 75 percentiles reduces shipping costs by more than 12 percent.²²⁷

374. Congestion and delays arise because of low port efficiency. A news report cited by Wilson and Otsuki²²⁸ revealed continued problems of congestion at the Nhava Sheva port in India. Exporters lose around Rs 800 crore a month because of delayed shipments. They usually pay 4 percent of the product value for shipment. Because of congestion at the port, an exporter had to send his consignment by air, which cost 40 percent of the value of the product.

375. It is noted that Nhava Sheva is India's top container port, which handed 2.3 million TEUs in the fiscal year 2005 despite having only 1,280 meters of berth at two container terminals. The increasing congestion over the last few years caused growth to ease off. Bangladesh ports have experienced steady growth in traffic despite a congestion-related slowdown in 2001-02. However, these do not have ship to shore gantry cranes (SSGs) and handling rates remain at about five-six moves per vessel hour. The result is a vessel turnaround that averages five days and is difficult to predict (Arnold, 2007).²²⁹

376. South Asia has a low level of port efficiency and transport logistics and relaxing these constraints will lead to lower transaction costs and greater intra-regional trade. The improvements in Pakistan's Karachi and Qasim ports are steps in the right direction as reported by Arnold (2007). The privatization through concessions allowed the introduction of

²²⁶ Hoekman, Bernard & Nicita, Alessandro, 2008. "Trade Policy, Trade Costs, and Developing Country Trade," Policy Research Working Paper Series 4797, The World Bank.

²²⁷ Clark, X., D. Dollar and A. Micco, 2004, "Port efficiency, maritime transport costs, and bilateral trade," Working Paper 10353, Washington, DC: The World Bank, Quoted by Wilson and Otsuki (2007, page 247).

²²⁸ Business Standard, August 6, 2004.

²²⁹ John Arnold, 2007. "The role of trade facilitation in export growth," Chapter 8 in Ahmed and Ghani (2007).

modern quay cranes and an end to chronic congestion. Berth productivity at the Karachi container terminal has increased to 25 moves per crane hour while Qasim terminal has 22-24 moves per crane hour. Vessel turnaround times average about 16 and 21 hours, respectively. For both ports, the berth throughput is limited by having only two cranes per berth and by increasing yard congestion. These represent areas that could be further improved.

Airways and Civil Aviation

377. Although civil aviation had grown rapidly in South Asia in recent decades, the region's share in both total international passenger movements and freight transport was relatively small vis-à-vis other regions. Notwithstanding this, and although the potential contribution of civil aviation to overall regional connectivity remains to be empirically observed, the importance of civil aviation in facilitating business, tourism and moving goods should not be undermined

378. Air cargo traffic on the other hand has been increasing for India but fluctuating for other countries. This suggests a comparative disadvantage vis-à-vis other modes of cargo transport, particularly, land transport. While this may be on account of improvements in road network, areas for complementation and smooth transitions between land and air transport should be carefully explored.

379. Given the limited nature of regional air travel relative to domestic air travel and wider international travel at most of these regional gateways, its impact on capacity utilization of airside and landside infrastructure at any of these regional gateways will only be marginal. Accordingly, there are unlikely to be any physical barriers that specifically, or unduly, impact on regional civil aviation connectivity for South Asia. This assessment is supported by the fact that many of the airports identified above as regional gateways have, since 2005, undergone or are undergoing major capacity expansions, often through the PPP modality.

380. The entry of new private sector and/or low-cost carriers into regional civil aviation in recent years suggests that the current regime of bilateral ASA offers sufficient flexibility for operators to respond to market opportunities in terms of service frequencies and new routes. With several regional countries, such as India, Sri Lanka and Pakistan, moving towards "Open Sky" policies for passenger and cargo transport, the prospects for greater openness in regional civil aviation appear good.

381. The need to transit through a third country while flying between certain pairs of countries raises the possibility of two non-physical barriers to regional air connectivity. The first of these is in relation to ticketing for flights requiring transit as not all airlines in the region have inter-line ticketing arrangements. The second relates to possible visa requirements for passengers in transit if the transit country requires such passengers to move from airside to landside at the transit airport rather than transit on the airside only.

IV. CONCLUSIONS

382. Although some of the basic infrastructure and facilities to establish mutually beneficial intra- and inter-regional transport networks already exist, South Asia's transport network remains largely fragmented.

383. South Asia needs an efficient transport infrastructure to be able to exploit trade opportunities offered by growing economies of the region, principally India and Sri Lanka, and to develop greater complementarities among the region's economies.

384. The chapter provides a summary of the state of transport infrastructure: poor road conditions, lack of intraregional connectivity between the national road networks, unrealized potential for rail and inland water freight transport, and inadequate road and rail connectivity of ports. More specifically, the potential of developing transport corridors has been identified as a key to bring down the cost of transport of people and goods.

385. There is a huge need for investments in transportation corridors, that is in road, ports, waterways and air infrastructure but the response by the private sector, which has the investible funds seems anemic. While the public sector can do much to improve the state of transportation corridors, there is a need to explore various modalities under public-private partnerships, which will unlock private capital and expertise for those investments in the corridors.

386. Development partners like ADB and World Bank can also play an important role in providing additional financial resources, whenever necessary. Moreover, ADB and World Bank's technical experience, knowledge and expertise in both the transport sector and the region can also be tapped in developing, or linking the already existing individual national transport master plans into an integrated regional transport roadmap to ensure connectivity of all modes of transport particularly in the corridors.

387. Some of the constraints to an efficient regional transport corridor however, cannot be taken in isolation as some of the causes are beyond the confines of the transport sector alone as these are linked to other issues of politics, trade, resource disputes (e.g. land and water), environment, etc. While some of the constraints can be addressed at the national and bilateral levels, the full potential of the transport corridors can only be realized thru regional cooperation and integration.

Chapter 5

PRIVATE SECTOR INVESTMENT IN INFRASTRUCTURE AND UTILITIES AND THE COST OF FINANCE IN SOUTH ASIA

I. INTRODUCTION

388. For developing countries, the high cost of debt servicing, increasing expenditures, inability to collect substantial tax revenues, and declining aid flows, weigh heavily on the public sector. Faced with pressure from multilateral agencies to consolidate their fiscal position and strive to reduce the fiscal deficit, governments in those countries have become constrained to finance projects, especially infrastructure projects from the public purse. In response, governments have reduced their involvement in the implementation of projects (i.e. infrastructure) and turned to the private sector for assistance.

389. During the last two decades, private sector participation (PSP) and public-private partnerships (PPPs) have emerged as a vital tool in building, managing, and operating projects, which otherwise, cash-strapped governments would be forced to provide. Partnership with the private sector has been in a range of activities from design, construction, and management of projects, financing as well as to building and operating infrastructure assets.

390. But like its public sector counterpart, the private sector firms are not invulnerable to financial risks and constraints. It is commonly believed that the cost of finance and the lack of access to financial services may constitute a significant constraint to making investments in infrastructure and other long-lived assets.

391. In the post-financial crisis faced by the public sector and private entities, will the cost of finance constitute a significant constraint to realizing much-needed infrastructure investments and support in South Asia? The High Level Forum has identified the need for the region to invest in transport corridors, regional energy and improve trade facilitation in order to achieve greater regional cooperation and integration. The question that this Chapter wants to address is whether or not the cost of finance is a hindrance to motivating greater private sector participation in those activities/projects that have been identified by the High Level Forum.

392. This Chapter is organized as follows:

This **Section I** introduces the concept of private sector investment and cost of finance in South Asia as a possible constraint to regional cooperation and integration;

Section II provides an overview of the private sector investments in the region as well the structure of the South Asian financial sector;

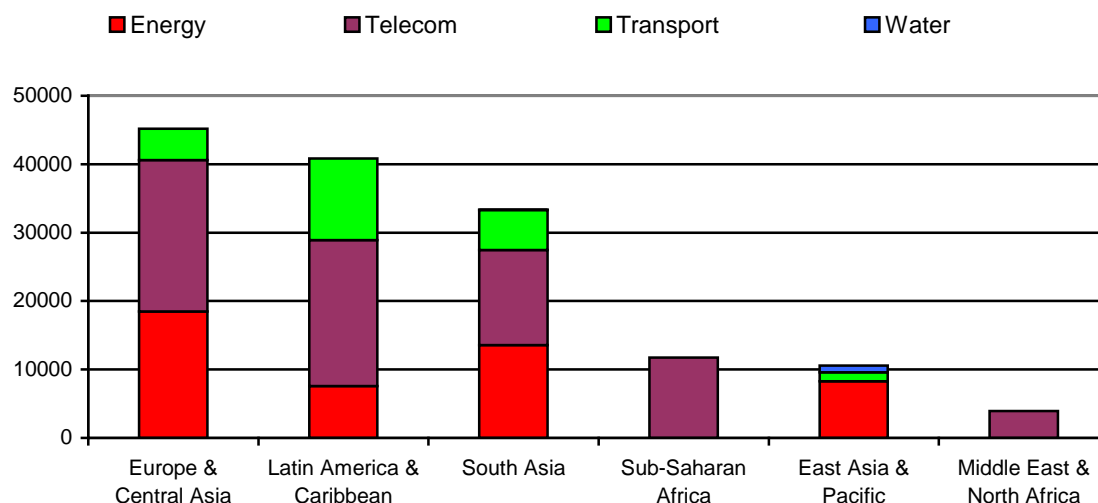
Section III discusses the macrofinancial indicators that directly impacts on the cost of finance and determines whether or not these are binding constraints to regional cooperation and integration.

II. OVERVIEW OF PRIVATE SECTOR INVESTMENT AND THE FINANCIAL SECTOR

Private Sector Investment in Infrastructure and Utilities

393. South Asia has a relatively good level of private sector participation vis-à-vis other regions. In 2008, the World Bank reported that the region generated a total of US\$ 33 billion worth of private investments, slightly behind the regions of Latin America and the Caribbean (US\$ 40 billion) and Europe and Central Asia (US\$ 45 billion) (Figure 5-1).

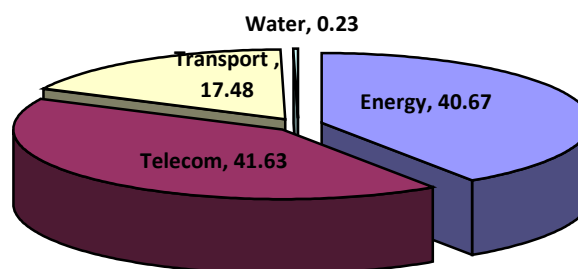
Figure 5-1 Private Sector Investment (US\$ million), 2008



Source: World Development Indicators, 2010.

394. Majority of the total 2008 South Asian private infrastructure investments went to telecommunications and energy (42% and 41%, respectively) while the remaining investments went to transport (17%) and a very small proportion to water (Fig 5-2).

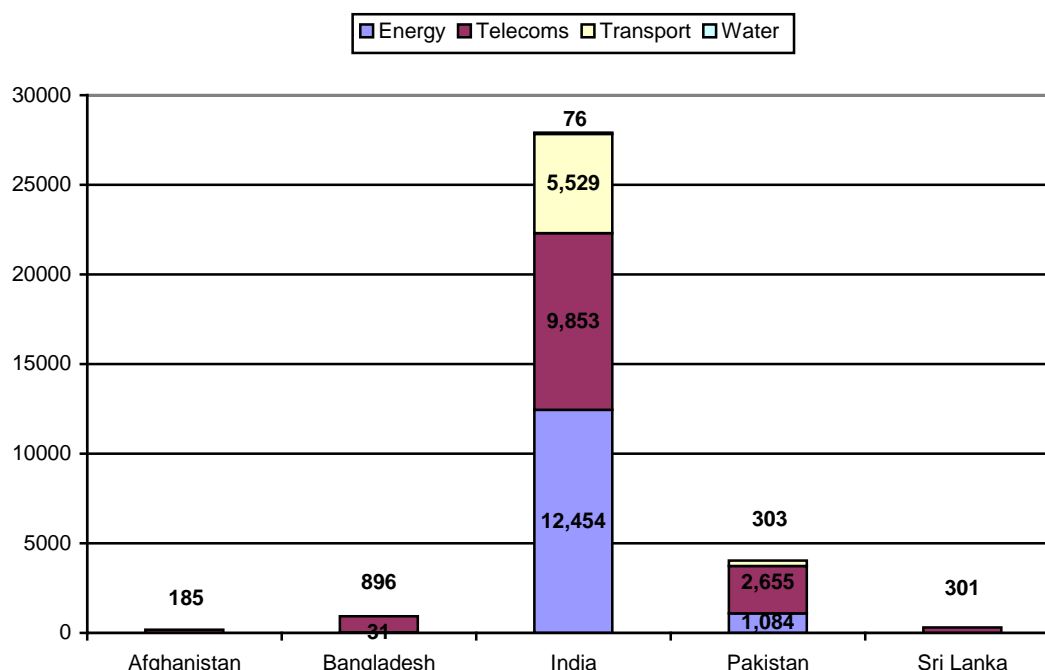
Figure 5-2. South Asia Private Sector Investment by Sector, 2008



Source: World Development Indicators, 2010.

395. While the level of private investment is relatively comparable with other regions, this is still deemed inadequate vis-à-vis the level of infrastructure development needed in the region as majority of the private sector investments in 2008 went to India (Figure 5-3).

Figure 5-3. Private Sector Investment by Country and by Sector, 2008



Source: World Development Indicators, 2010.

396. Bhatia and Gupta (2006)²³⁰ pointed out that many households and businesses in the region still lack access to utility services and other infrastructure, and those who do have access suffer from unreliable and poor-quality service, to wit:

- Power cuts and shortages impose huge costs on consumers, with the biggest burden on industry and poor people.
- No city in the region has water available 24/7. Choked sewerage and sewage-polluted water systems pose serious health hazards.
- Neglected maintenance of roads causes congestion, frequent accidents, and excessive wear and tear on vehicles. Congested ports and poorly maintained highways hamper trade within the region.

397. Given this picture of the extent of private sector investments in infrastructure and utilities in South Asia and the status of the financial markets in this region, the Chapter wants to find out if cost of finance is a binding constraint to private investments.

²³⁰ Bhatia, Bhavna and Gupta, Neeraj. 2006. Lifting constraints to public-private partnerships in South Asia. PPIAF Gridlines Note No. 6 – May 2006

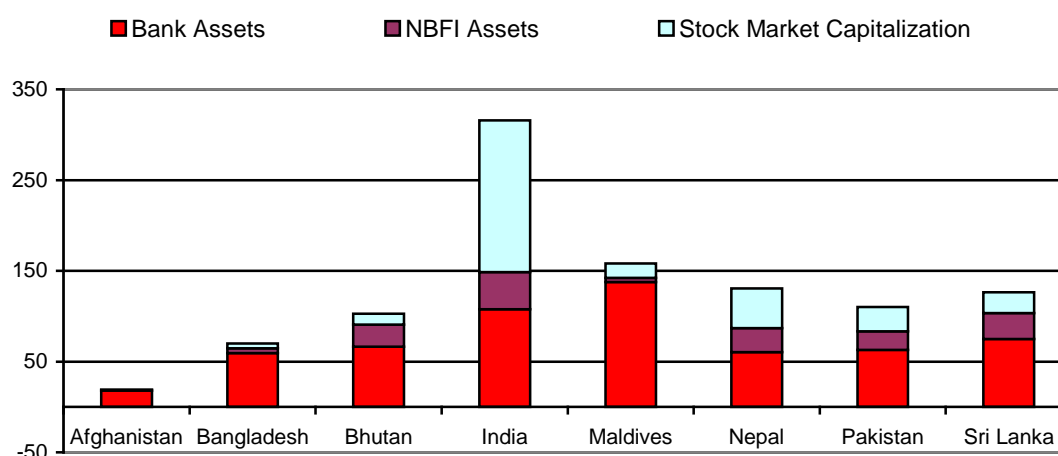
Structure of the South Asian Financial Sector

398. As pointed out by many studies over the years, efficient financial markets channel funds from surplus units of the economy (the savers) to deficit units (entrepreneurs/investors) at prices that meet the respective economic goals of those diverse economic agents. Access to the formal financial markets provides opportunities for achieving various consumption (e.g., purchasing consumer goods and big ticket items such as automobiles) and investment demands (e.g., starting and running a business, investing in lumpy projects such as infrastructure). In an ideal setting, financial markets are, therefore, critical to a market economy's overall growth and development because they help allocate scarce resources to consumption and investment activities that society finds most useful.

399. South Asia's financial sectors share a legacy of direct state involvement in banking and other financial services. The financial sectors in South Asian countries are in varying stages of development but while most countries in the region have a reasonably well functioning banking sector, many sectors of the financial system still remain underdeveloped.

400. As of 2008 banks dominate the financial system in South Asia but with the exception of India, which has a larger stock market base in addition to a relatively better developed banking system (Figure 5-4).

Figure 5-4. South Asia's Financial System (% of GDP), 2008



Source: South Asia Economic Report. ADB, 2009.

401. On the other hand, the development of nonbank institutions lags behind the banking sector, with most countries in the region lacking legal frameworks and supervisory structures to support growth of contractual savings vehicles such as life insurance and pensions.²³¹

402. As far as the capital market is concerned, the capital markets of Afghanistan, Bangladesh, Bhutan, and Maldives are still at preliminary stages of developments. But while Pakistan, Nepal and Sri Lanka have reasonably well developed financial markets, India has already established a mature capital market, with highly sophisticated stock exchanges, clearing corporations, depositories and derivatives markets. India's stock market ranks among the world's highest in terms of domestic market capitalization (Table 5-1).²³²

²³¹ ADB. 2009. South Asia Economic Report.

²³² World Federation of Exchanges. Domestic Market Capitalization in 2009.

Table 5-1. The World's Top 15 Stock Exchanges by Domestic Market Capitalization in 2009

Rank	Exchange Name	Country	Domestic Market Capitalization (in \$ billions)
1	New York Stock Exchange	United States	11,837
2	Tokyo Stock Exchange	Japan	3,306
3	NASDAQ	United States	3,239
4	Euronext	Belgium, France, Holland, Portugal	2,869
5	London Stock Exchange	United Kingdom	2,796
6	Shanghai Stock Exchange	China	2,704
7	Hong Kong Stock Exchange	Hong Kong	2,345
8	Toronto Stock Exchange	Canada	1,608
9	BM&FBovespa	Brazil	1,337
10	Bombay Stock Exchange	India	1,306
11	BME Spanish Exchange	Spain	1,297
12	Frankfurt Stock Exchange	Germany	1,292
13	Australian Securities Exchange	Australia	1,261
14	National Stock Exchange of India	India	1,224
15	SIX Swiss Exchange	Switzerland	1,064

Source: World Federation of Exchanges

403. The expansion of stock markets in South Asia implies great potential in trading activities. However, secondary markets are not yet well developed due primarily to weak regulatory frameworks and inadequate information available to investors. Consequently, bank financing has remained as the main source of funds for productive investments in South Asia. World Bank (2009)²³³ observes that the private sector still continue to rely on bank credit rather than on bond or equity financing for their investment requirements.

404. Although the global financial crisis affected the economic activity in South Asia, the impact was much less pronounced compared to other developing regions. The World Economic Forum explained that this may be due to limited exposures to the sub-prime markets and global banking systems—as the region's financial markets are less integrated than elsewhere²³⁴. The impact of the crisis was more severe for those with weaker fundamentals and greater external vulnerabilities at the onset, including Pakistan, Maldives and Sri Lanka. Ongoing conflict and post-conflict issues also hampered economic activity in Afghanistan, Pakistan, Sri Lanka and Nepal.

²³³ World Bank. 2009. Getting Finance in South Asia 2009.

²³⁴ World Economic Forum. 2010. Global Economic Prospects Summer 2010 : Regional Annex.

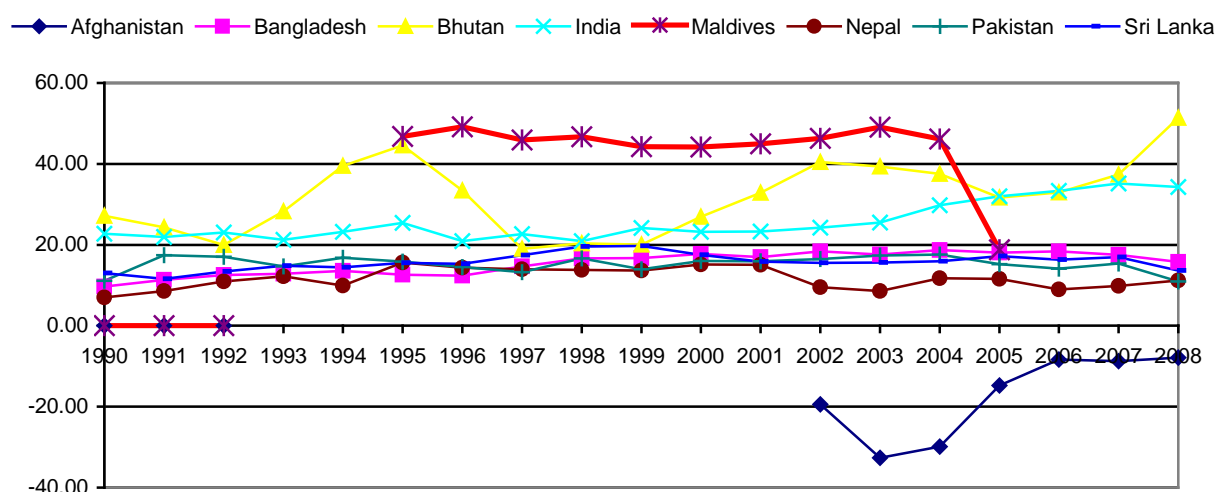
III. COST OF FINANCE IN SOUTH ASIA

405. Access to financial services is important in raising the standard of living of the poor and the underserved segments of society. Limited access to finance is considered a key constraint to private sector growth²³⁵ especially in developing countries, where people have little influence over policy reforms.

406. **Financial Deepening and Savings.** Measures of financial deepening indicate the extent to which financial intermediaries channel savings into productive investments. A low level of financial deepening indicates that individuals are more reliant on barter and informal savings, and hold real assets or livestock as stores of wealth. Deeper financial systems are better able to meet the demand for investment, easing constraints in external financing.²³⁶

407. In terms of gross domestic savings, with the exception of Bhutan, India and at some period, Maldives, the gross domestic savings rate as a percentage of GDP for the rest of the South Asian countries (Pakistan, Sri Lanka, Nepal, and Bangladesh) have been quite modest. Since 2002, Afghanistan, has posted negative gross domestic savings although this is slowly increasing (Figure 5-5).

Figure 5-5. Comparison of Gross Domestic Savings within South Asia (% of GDP)



Source: World Development Indicators, 2010.

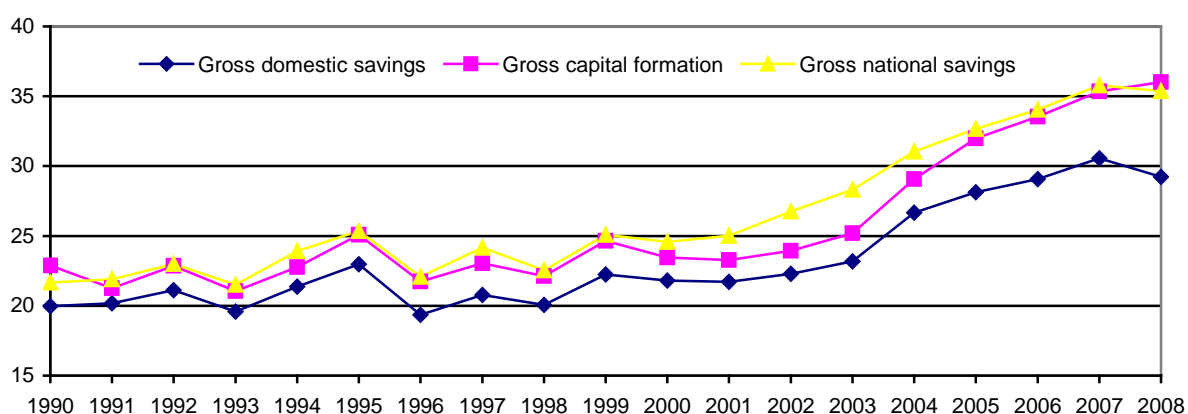
408. One explanation for the low levels of domestic savings especially in Afghanistan, may be the low income levels whereby households would need to spend a higher share of their incomes on just to meet basic consumption needs leaving less room, if at all, to savings. The low level of domestic savings can constrain the ability of an economy to grow especially when the economy has limited access to international sources of finance. In particular, the low domestic savings can push up the real interest rates and can make it costlier for the investors to finance their investments.

409. A comparison of the gross domestic savings with the investment rate (gross domestic capital formation) of the region does not suggest a large gap between the two over the years although the gap tends to widen at the later stage of the period (Figure 5-6).

²³⁵ Beck, Thorsten, Asli Demirgüç-Kunt, and Maria Soledad Martinez Peria. 2005. "Reaching Out: Access to and Use of Banking Services across Countries." Policy Research Working Paper No. 3754. World Bank, Washington, D.C.

²³⁶ ADB. 2009. South Asia Economic Report.

Figure 5-6. Comparison of Savings and Investments 1985-2008 (% of GDP)



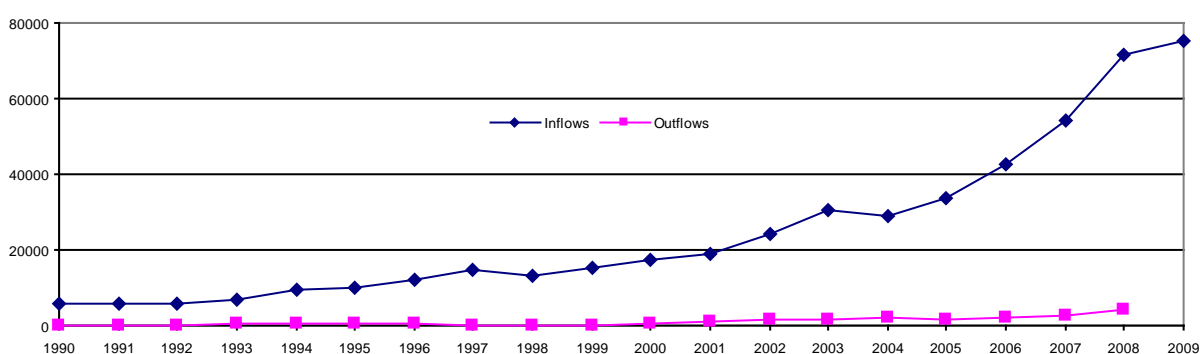
Source: World Development Indicators, 2010.

410. While this may mean low savings rate may not have been an impediment to investment and economic growth in the region, domestic savings rate alone does not capture the significant contribution of remittance inflows from abroad.

411. **Remittances.** Workers' remittances have constituted one third of net total private capital flows into the developing countries, second only to FDI flows. Available data from the World Bank shows that there has been a marked increase in the magnitude of workers' remittances into the developing countries from about US\$ 85 billion in 2000 to about US\$ 28 billion in 2007. Among the developing countries, South Asia has, on average, received about 20 per cent of global remittance receipts destined to the developing countries between 2000 and 2007²³⁷. Hence, any negative trend in remittances would have implications for domestic demand and the balance of payments.

412. Figure 5-7 shows the large disparity between remittance inflows and outflows in the region. The remittance flows show that while outflow has remained relatively stable, the inflows have increased almost threefold from US\$ 28 billion in 2004 to US\$ 71 billion in 2008. The same picture can be drawn from the individual country remittances which are detailed in Annex Tables 5-1. and 5-2.

Figure 5-7 South Asian Region Remittance Inflows and Outflows, (\$ million)

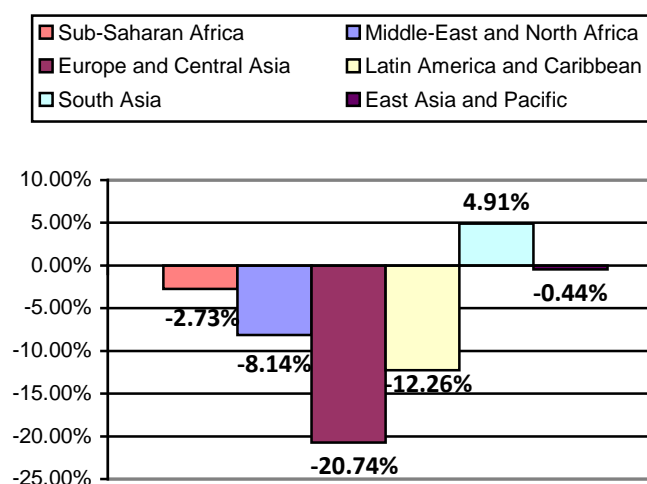


Source: Migrant Remittance Flows: Findings from a Global Survey of Central Banks. 2010.

²³⁷ Gopalan, Sasidaran and Ramkishan Rajan. 2010. External Financing in South Asia- The Remittances Option. In ARTNET Brief No. 23, January 2010.

413. Remittances also proved to be a key source of strength for the region during the global downturn. The World Bank (2010)²³⁸ noted that remittances inflows to the region even expanded 4.9 percent in 2009—while other regions in the rest of the developing world declined (Figure 5-8).

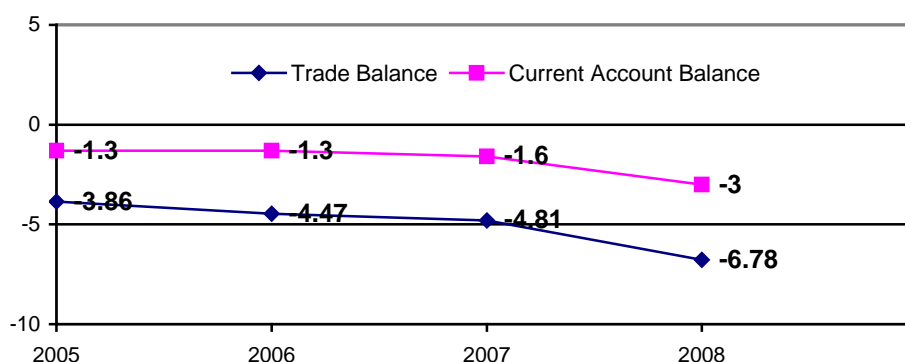
Figure 5-8. Growth of remittances inflows for 2008-2009 (est.), annual percent change



Source: Migrant Remittance Flows: Findings from a Global Survey of Central Banks

414. **External Accounts.** With regard to the external accounts position, both current account and trade balance (as a % of GDP) for the region have been worsening in the period 2005 to 2008 (Figure 5-9). Country details are appended as Annex Tables 5-3 and 5-4.

Figure 5-9. Current Account and Trade Balance 1990-2007 (% of GDP)

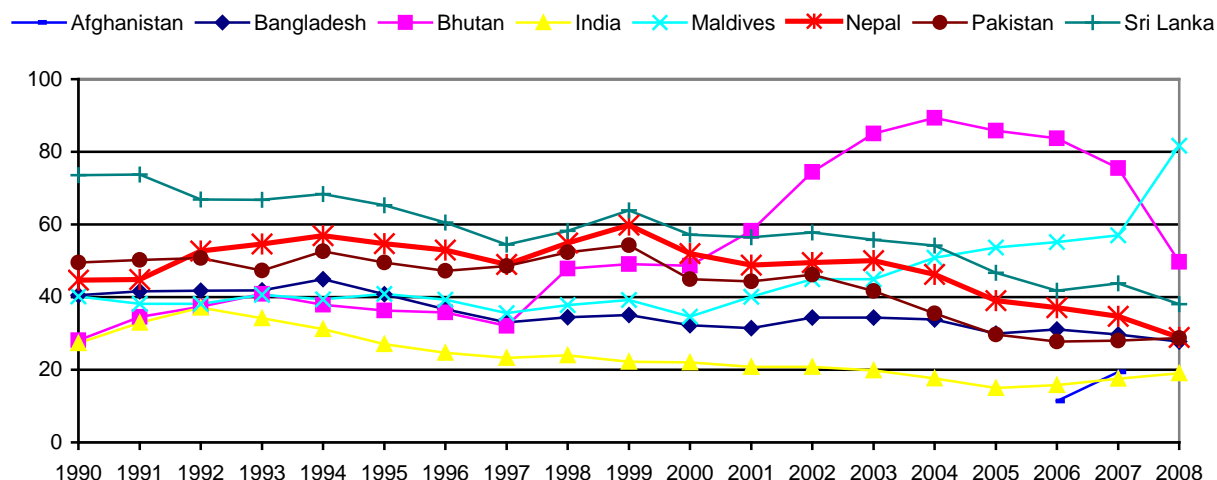


Source: World Development Indicators 2010 and ADB Key Indicators 2009.

415. External indebtedness as a % of GNI has been generally declining, except for Maldives which has shown gradual increase from 2000-2007 and significant increase (57% to 81%) from 2007-2008 (Figure 5-10). However, in absolute terms, external indebtedness for the South Asia region is relatively large, which means a high debt servicing burden to many countries in the region.

²³⁸ World Bank. 2010. Migrant Remittance Flows: Findings from a Global Survey of Central Banks.

Figure 5-10. Comparison of External Indebtedness 1990-2008 (% of GNI)



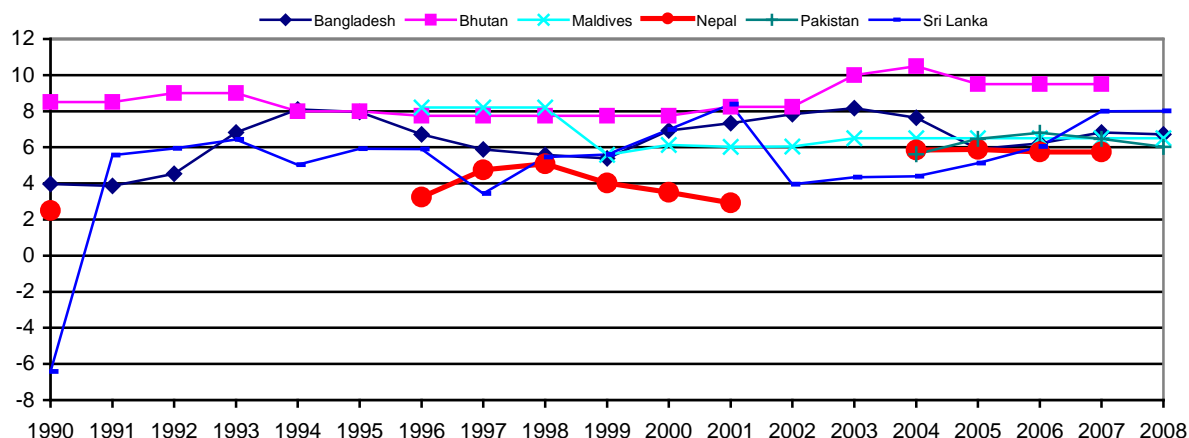
Source: World Development Indicators, 2010.

416. The evidence and discussions cited above suggest that modest levels of domestic savings may have been compensated by significant levels of remittance inflows, which propped up the national saving to levels well above the domestic investment rates. But while the levels of national savings can comfortably meet the current levels of domestic investments, low levels of domestic savings may become a constraint to growth if the remittance inflow levels were to be negatively affected by downturns in the global economy or the investment levels were to experience a sharp upsurge. The issue, however, is whether those significant remittance inflows could be effectively channeled to meet the rising investment level.

417. **Efficiency of financial intermediation.** Inefficiencies in financial intermediation can also affect the cost of finance for investors. One indicator of gauging the efficiency of the banking system is the spread or difference between the lending and deposit rates. An efficient banking sector will have lower interest rate spreads than a sector that is inefficient.

418. Among South Asian countries, Nepal had the lowest spread between lending and deposit rates but the rest would have spreads ranging from 6 to as much as 10 percent (Figure 5-11).

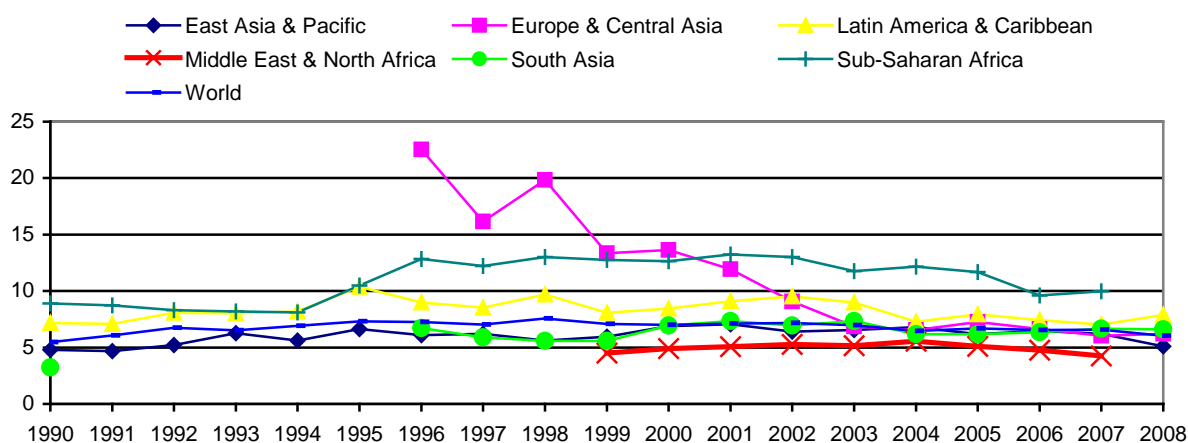
Figure 5-11. Comparison of Spreads between Lending & Deposit Rates within South Asia



Source: World Development Indicators, 2010.

419. As a whole, however, the region's banking sector efficiency in financial intermediation as of 2008, falls behind those of the regions of Middle East and North Africa, East Asia and the Pacific and Europe and Central Asia (Figure 5-12)

Figure 5-12. Regional Comparison of Spreads between Lending and Deposit Rates



Source: World Development Indicators, 2010.

420. Metzger (2009)²³⁹ noted that one factor contributing to the persistent high interest spreads might be a lack of competition, in particular by those segments of the financial system, which offer alternatives to the traditional commercial bank loan, that is, the corporate debt market. Another explanation for high intermediation costs could be the relatively high level of non-performing loans, which prevent a reduction of high lending rates. Although the ratios of non-performing loans to total loans have declined significantly, they have not been falling sufficiently to depress lending rates.

421. The foregoing suggests that there may be a considerable scope for improving the efficiency of the financial system, which will help reduce the costs of intermediation

422. **Credit.** Credit to the private sector is very important as it indicates the extent to which savings are channeled by the financial system into productive private sector investments rather than simply being used to meet government financing needs.

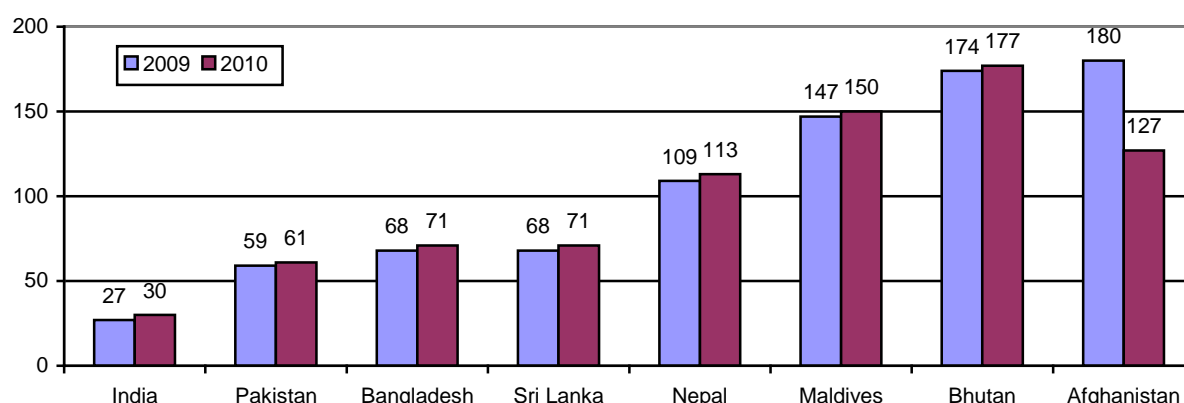
²³⁹ Metzger, Martina. 2009. Trends in Financial Market Development in South Asia.

Nevertheless, credit to the private sector as a percent of GDP remains low²⁴⁰. This can be attributed to (a) the still developing state of most banking sectors in the region, (b) the continuing role of (government) directed lending and support for other state-owned institutions, (c) co-opting of bank deposits for government financing through high reserve requirements, and (d) the more general crowding-out effect of high government deficits.

423. Access to information on credit and on registered assets used as collateral helps creditors assess the creditworthiness of potential future clients. Although a credit history is not a substitute for risk analysis, when banks share credit information, banks can assess borrowers' creditworthiness using objective measures. And if lenders are also reassured by strong creditors' rights, it allows them to take greater, well-informed risks. This in turn can make access to finance easier, particularly for small and medium-size entrepreneurs. Where collateral laws are effective and credit registries are present, banks are more likely to extend loans.

424. Particularly in developing economies, many small and medium-size companies do not have access to formal credit and have to rely on personal funds and operating profits. Among the South Asian countries, India ranks highest (rank 30 in 2010) in terms of getting credit²⁴¹ (Figure 5-13). All countries in the region slid in rank, except for Afghanistan, which improved from the bottom rank of 180 in 2009 to 127 in 2010 overtaking Maldives and Bhutan. The improvement may be due to Afghanistan's enactment of a modern secured transactions law which improves the mechanisms available for businesses to secure a loan.

Figure 5-13. Getting Credit in South Asia, 2008-2009 Ranking out of 183 economies.



Source: Doing Business 2010.

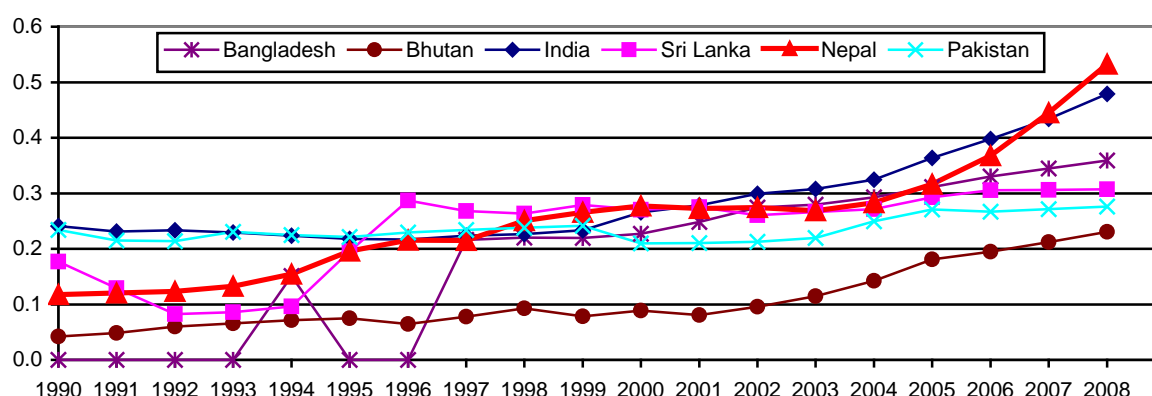
425. One way to improve access to getting credit is to encourage the sharing of information through credit registries or bureaus and strengthen the legal framework related to collateral.

426. Credit-to-GDP ratio has been generally increasing, and in some countries like Nepal and India it has increased by more than the three folds since 1985 (Figure 5-14). While this contributes to further deepening of the financial sector, there is still substantial room for improvement.

²⁴⁰ ADB. 2009. South Asia Economic Report.

²⁴¹ Getting Credit (by Doing Business) is measured in terms of (a) the legal rights of borrowers and lenders and (b) the scope and quality of credit information systems. The first set of indicators describes how well collateral and bankruptcy laws facilitate lending. The second set measures the scope, quality and accessibility of credit information available through public credit registries and private credit bureaus and provides information on coverage.

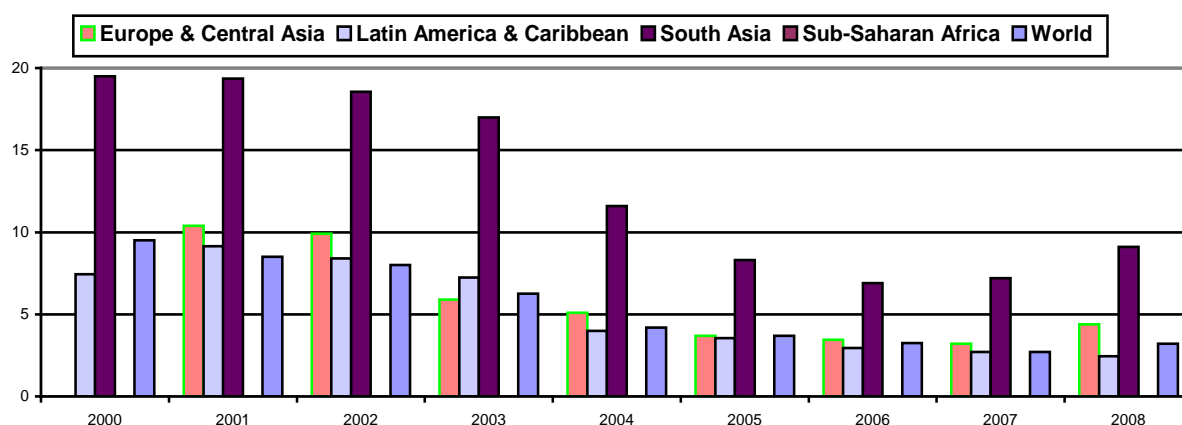
Figure 5-14 Comparison of Ratios of Domestic Credit to GDP within South Asia



Source: For Nepal, NRB (2008) the rest, Thorsten Beck et.al(2000)²⁴²..

427. Banks curtail their lending levels if lending was considered risky and the banks wanted to limit their exposure to risk. However, it seems that in the past, South Asian banks have made bad loans as indicated by high ratios of non-performing loans to total loans. Those banks have made efforts to reduce their stock of non-performing loans as shown in Figure 5-15. This shows a declining trend from 2000-2006 although there could be seen a slight increase in 2007-2008.

Figure 5-15. Non-Performing Loans as Percentage of Total Loans

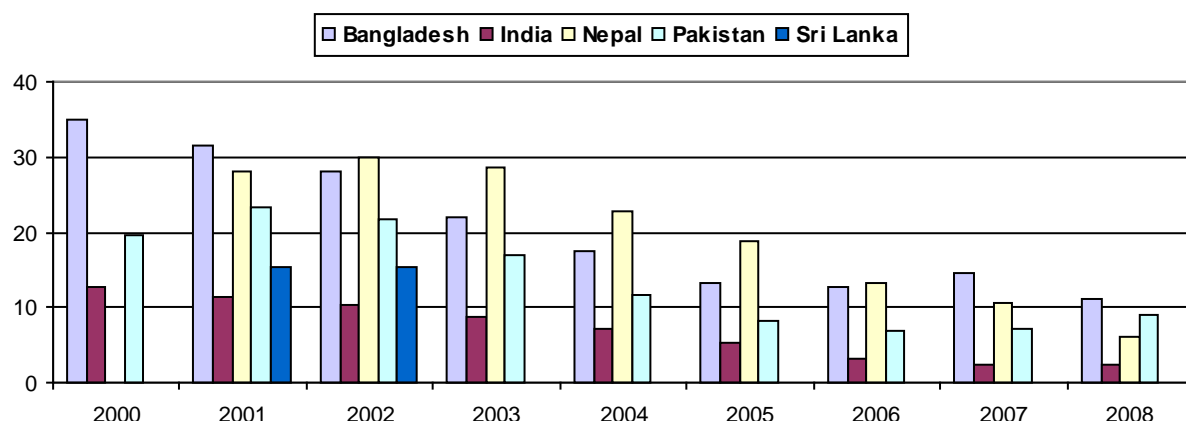


Source: World Development Indicators, 2010.

428. The same trend can be seen at the sub-regional level (Figure 5-16) with the ratio of non-performing loans to total loans declining over time. The declining trend in the non-performing loans rate indicates that the health of banks' loan portfolio has been improving and that banks have started to adopt more prudent lending techniques, e.g., employing stricter loan screening, getting more information on loan applicants. This is most evident in the case of India and Nepal.

Figure 5-16. Non-Performing Loans as Percentage of Total Loans

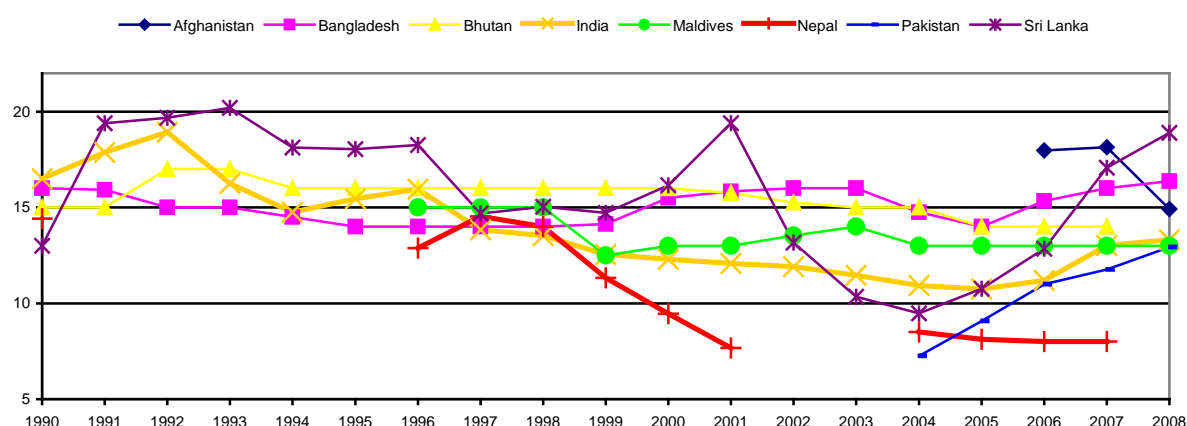
²⁴² Thorsten Beck and Asli Demirgüç-Kunt, "Financial Institutions and Markets Across Countries and over Time: Data and Analysis", World Bank Policy Research Working Paper No. 4943, May 2009



Source: (1) For Bangladesh, India, Pakistan and Sri Lanka - World Development Indicators, 2010;
(2) for Nepal - IMF (2001 & 2002), NRB (2003 to 2008) Banking and Financial Statistics.

429. In terms of lending, the lending rates are varied within the region ranging from a low of 8% (Nepal) to a high of 18% (Afghanistan) in 2007 (Figure 5-17). The general picture is one of volatility of lending rates although there appears to some stability in Bhutan, Bangladesh and Maldives. The other countries exhibit an upward trend in high lending rates, perhaps indicative of a higher risk aversion of lending institutions.

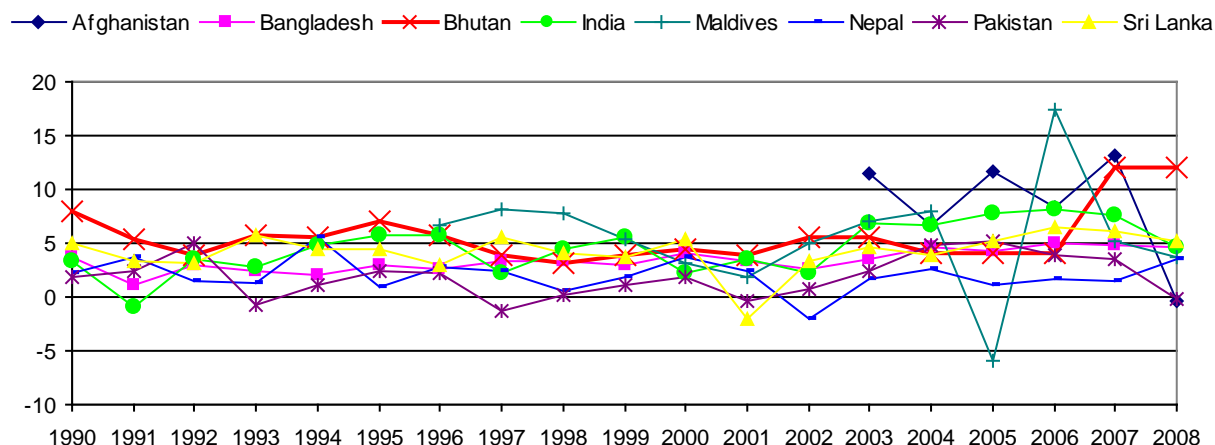
Figure 5-17. Comparison of Lending Rates with other South Asian Countries (%)



Source: International Finance Statistics and World Development Indicators, 2010.

430. When juxtaposed to per capita GDP growth (Figure 5-18), the erratic trend of lending rates suggests little or no correlation with per capita GDP growth rate.

Figure 5-18. Per Capita GDP Growth Rates (%)



Source: World Development Indicators, 2010

431. This seems to suggest that cost of finance or perhaps even access to finance may have had an insignificant effect on spurring growth and that other factors such as regional instability or conflict, poor infrastructure, weak regulatory frameworks may have been more critical factors than just borrowing costs. This doesn't seem plausible because several countries in the region, notably India and Sri Lanka have shown a relatively strong economic performance due to the market-enhancing impact of policy reforms, e.g., trade liberalization and focus on emerging revealed comparative advantage that have been adopted in the late 1980s-1990s.

IV. CONCLUSIONS

432. The dominance of the banks and bank loans and the state of capital markets in the region indicates that the financial system in South Asia is still relatively underdeveloped.

433. The ratio of non-performing loans to total loans have generally gone down over the past few years but some reforms are needed: the spreads are high, indicative of relative inefficiency of the banking system and lack of competition; there is a considerable gap between domestic savings rate and investments rate but this can be narrowed by effective channeling of remittances; current account and trade balance deficits are worsening.

434. So, is cost of finance a binding constraint? The level of aggregate domestic savings is relatively low, but this may not be a constraint as strong remittance inflows are financing the shortfall.

435. Even if the banking system is inefficient, perhaps, short-term oriented, still the large current account deficit and the continuing external indebtedness provide the necessary financing.

436. Even if domestic financial intermediation is inefficient (large spread between lending and savings rate) vis-à-vis other major regions, private investors would still be able to access finance. Finance seems to be accessible but only for the top grade large companies. As seen in South East Asia and other major regions, it is the SMEs that face credit financing problems. Hence, domestic financial intermediation could be improved and may not constitute a critical constraint

437. Growth in real domestic credit has been generally increasing and although borrowing cost is high in some countries within the region, there is no strong evidence to critically constrain investment and growth.

438. Moreover, while access to international financial markets is limited, it does not constitute a critical constraint.

439. Overall, the cost of finance is not considered as a critical constraint. The large ticket items – transport corridors and energy investments are not really constrained by lack of capital; it is the non-financial reasons, as enumerated in the constraints analysis of these sectors that are considered binding.

Chapter 6

RECOMMENDATIONS

440. Policy makers in the South Asian region believe that there is a significant case for greater cooperation and integration in South Asia, which is expected to contribute to more rapid growth, poverty reduction and greater political stability for the region. Various scholars have noted South Asia as “experiencing a new economic era” today. However, although a regional cooperating body was established in the region more than 25 years ago in the form of the South Asian Association for Regional Cooperation (SAARC), the level of integration in South Asia still remains low.

441. There are many reasons behind the failure to achieve regional cooperation and integration in the region and identifying the most binding constraint or constraints was deemed to be the first critical step in mapping out a workable strategy to achieve sustainable regional cooperation and integration.

442. In line with this objective, the South Asia Regional Department (SARD) of the Asian Development Bank conducted a High Level Forum (HLF) on Emerging Vision for Shared Prosperity: South Asia and Beyond in April 2009 and Post-HLF country consultations in Bangladesh, Bhutan, Maldives, Pakistan Nepal and Sri Lanka.

443. The High Level Forum has identified the development of three pathways to greater regional cooperation and integration: (a) transport corridors, (b) regional energy trade, and (c) trade facilitation. Taking off from the aforementioned consensus about the priority areas, which are perceived to be the most critical barriers to South Asian regional cooperation and integration, this report attempted to identify the binding constraints to achieving more efficient transport corridors, regional energy trade and trade facilitation in the region.

444. The earlier Chapters used a constraints analysis framework to identify the constraints to the development of transport corridors, regional energy trade, and trade facilitation. A constraints analysis approach provides policy makers with vital information on significant barriers to growth and development of a sector, e.g., trade, or even of the whole economy or region that could help them develop better and more effective policies to address those constraints.

445. The following recommendations arise from the constraints analysis done on the identified pathways for regional cooperation and integration. The first set of recommendations refers to each of the identified pathways or priority areas. Here the recommendations could help provide greater mobility of goods and factors of production and physical connectivity within the region, stimulate regional energy trade that can provide reliable and adequate energy to the region, and ease constraints to regional trade. The second set of recommendations pertains to crosscutting issues that affect an entire range of activities: investments, production, trade and consumption in the region.

Trade Facilitation

446. While the region’s total trade volume has been increasing for the past ten years, intra-regional trade remains very low. The pace of tariff reforms under the existing South Asia Free Trade Agreement (SAFTA) has been very slow and overshadowed by fragmented bilateral agreements within the region as well as outside of the region. For trade facilitation to spur regional cooperation and inclusive growth, the following significant constraints should be addressed: (1) high tariff walls; (2) inefficiencies in ports operation and logistics performance; (3) inefficient custom and regulatory environment, and land or cross-border

procedures; and (4) unresolved regional and internal political conflicts and strife. In this regard, the following are recommended:

- Review and simplify customs documentation, procedures and processes through the use of information and communications technology, e.g., installation of electronic data interchange systems, developing a regional single window that enhances and makes efficient the exchange of information between customs authorities and private exporters/importers. A regional single window can improve risk management, enhance security at the ports, and increase border revenue with trader compliance.
- A regional single window will enable traders to lodge standardized information documentation with a single entry point to fulfill import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements could be submitted once simplifying customs processes and reducing transaction costs²⁴³.
- Review and shorten, if not remove, the sensitive lists to improve SAFTA's tariff liberalization program.
- Invest in ports facilities, e.g., improving warehouses and warehousing system, cargo handling, and efficient road networks connected to ports to improve operations and logistics performance.
- Engage the private sector thru PPPs to improve ports operation and management, e.g., concession in Karachi and Qasim ports, which increased vessel turnaround and eased port congestion.
- Review and simplify road protocols and transit procedures especially in cross-border facilities.

Regional Energy Trade

447. South Asia's energy sector is diverse with a relatively developed coal-reliant Indian energy sector, relatively underdeveloped energy sector in Bhutan and Maldives and a hydro-rich energy sector in Nepal and Sri Lanka. The South Asian region is a net energy importer and fast growing demand for energy makes energy security a major concern. The electricity and gas shortage in the region has been described as persistent and recurring. Without a resolute action on the part of policymakers, it will hamstring growth in the region. There is great potential for energy trading within the region but intra-regional energy trade is low. Policymakers should address the following significant constraints: (1) inadequacy of domestic energy supply for energy trade; (2) inadequacy of private sector participation; (3) poor energy utility operational performance; (4) inadequacy of cross-border energy trade infrastructure; (5) immaturity of domestic energy sector regulatory frameworks; (6) inadequate access to finance and a reliable business environment; and (7) inadequacy of project development information.

448. In view of the foregoing, the following are recommended:

- Review the current status of public-private partnerships, strengthen and promote public-private partnerships and private sector participation as a mechanism for developing the capacity to generate and have an adequate supply of energy in the region.

²⁴³ Recommendations and guidelines on establishing a Single Window, Economic Commission for Europe, United Nations, 2005.

- Develop a regional framework for coordination of policies, regulation, including provision of capital grants to resolve complex issues affecting regional power projects, e.g., hydrological, environmental, and social issues. In short, provide enabling environment for private sector participation.
- Address issues that contribute to poor energy utility performance: (a) inability of energy utilities to operate on a cost-recovery basis; (b) minimize, if not totally eradicate power theft through effective sanctions; (c) inefficient targeting of electricity subsidy to poor consumers; (d) non-payment of electricity bills by certain sectors, including government entities.
- On the part of energy surplus countries, adopt an export-oriented energy strategy; on the part of energy deficit countries, work with energy surplus countries toward competitive pricing and stability and reliability of energy supply.
- Seek the help of donors such as ADB in developing energy regulatory frameworks that will facilitate cross border energy trade. A regional energy regulatory framework will harmonize domestic legal and regulatory frameworks to facilitate trade.
- Leverage public sector funds and ODA made available by donors to attract private sector capital through such mechanisms as co-financing, guarantee, capital grants, build-operate-transfer schemes, joint venture arrangements, to bring down capital cost of investments in regional energy trade.

Transportation Corridors

449. Strong and well-connected transport infrastructure is crucial for unlocking economies of scale and improving competitiveness, especially for the landlocked countries in the region. The fragmented nature of South Asia's transport system however, has rendered the critical transport corridors inefficient. South Asia's transport corridors generally are characterized by poor road conditions, lack of intraregional connectivity between the national road networks, undeveloped rail and inland water freight transport, and inadequate road and rail connectivity to ports. On the other hand, the lack of transit agreements and protocols is also considered as a binding constraint. The development of those transport corridors has been identified as a key to bring down the cost of transport of people and goods and improve the competitiveness especially of landlocked countries. While some of the constraints can be addressed at the national and bilateral levels, the full potential of the transport corridors can only be realized thru regional cooperation and integration. The public sector can do much to improve the state of transportation corridors but exploring various modalities under public-private partnerships will unlock private capital and expertise for much-needed investments in transport corridors.

450. It is noted the political, institutional, technical and financial concerns should be addressed to ease constraints in the transportation corridors.

- Political – Initially, the members of South Asian countries need to set aside their political disputes and embrace regional cooperation as part of their national vision to capitalize on the gains flowing from economies of agglomeration and achieve high, sustained and inclusive growth. Regional cooperation can provide the necessary avenues for discussing and strategically planning how best to integrate the regional transport network. Moreover, regional cooperation in the transport sector can only achieve its objectives if significant progress is made towards removing the barriers to movement

due to the lack of traffic and transit rights. In the medium to long term, investing time and effort in persuading regional countries to ratify and implement existing international conventions and in encouraging them reach bilateral, or wider, transit agreements, is likely to pay much greater dividends in terms of enhancing regional cooperation than investing in more facilities at border crossing points.

- **Institutional** – Investment in transportation systems alone, however is not enough. There is also a need for policy reform, accompanied by improved procedural and operational efficiency to make sure that the infrastructure will realize its full potential. As delays can be attributed to the cumbersome customs inspection and clearance procedures that have to be followed on either side of the border, there also is a need to address the lack of coherence in terms of operational standards and practices in cross border facilities and customs offices. The absence of modern cross-border/customs facilities and equipment should also be considered to facilitate efficient cross border operations. Participation of the private sector can be tapped in improving the institutional and management capability of the corridors in lieu of government.
- **Technical and Financial** – Support from the private sector can also be tapped given the limited resources of the government both financially and technically. Nevertheless, the government should ensure that the policy support structures are conducive to make the sector viable for private sector financing.

Crosscutting Issues

451. The study has identified two crosscutting issues that have a common influence or effect on the three identified pathways to greater regional cooperation and integration, namely: (a) political conflicts and unresolved issues, and (b) cost and accessibility of finance.

Cost of Finance

452. Private sector investment and the cost of finance were also highlighted as relevant cross cutting issues inasmuch as lack of private sector investments in the various sectors has been repeatedly identified as a major constraint. The dominance of the banks and bank loans and the state of capital markets in the region indicate that the financial system in South Asia is still relatively underdeveloped. However, while some reforms are needed to make the financial system more efficient, the cost of finance in the region is not considered as a critical constraint. The report suggests that other factors such as regional instability or conflict, poor infrastructure, weak regulatory frameworks may have been more critical constraints to growth and poverty reduction than just borrowing costs. Reforms in these areas will make the region's financial system more efficient and provide greater accessibility to the private capital markets. While the cost of finance may not be considered as a binding constraint, still a more efficient financial system would help boost private investor confidence in the region.

Political conflicts and unresolved regional issues

453. Political conflicts and unresolved regional issues were identified as major crosscutting concerns that have constrained trade facilitation, energy trade and the development of transport corridors. Addressing them by countries in the region is a key issue.

454. Moving forward, greater cooperation and integration in South Asia is possible. However, the region can only reap the benefits of cooperation and integration (e.g. rapid growth, poverty reduction and greater political stability) once the binding constraints to regional cooperation and integration are addressed.

455. In this regard, the following are recommended:

- Use the High Level Forum to engage policymakers, private business sector and civil society in a participatory dialogue to find common solutions to the age-old regional political conflicts, which have stymied efforts for peace, stability of the region and cooperation. In the series of dialogues to be facilitated by an impartial third party participant (acceptable to the countries concerned), stress the growth and poverty reduction effects of greater intra-regional trade, regional energy cooperation, and easing mobility of trade and commerce through identified transport corridors. The ASEAN countries also have their respective border and political conflicts with each other but these did not deter the adoption of a cooperative and coordinative framework for trade and commerce.
- On the cost of finance, take steps to align legal and regulatory frameworks for infrastructure and utilities to improve cost-recovery of invested private capital. Seek the assistance of donors such as the ADB to strengthen macroeconomic and fiscal policies, financial markets, and regulatory institutions with a view to the development of private capital markets, e.g., bond markets, to support regional investments in infrastructure and utilities.

ANNEXES

Annex 1-1

Regional institutional structures in South Asia

1. Asian Clearing Union

Economic cooperation among South Asian nations is not a new phenomenon. Early evidences of promoting regional cooperation in South Asia can be traced to the establishment of the Asian Clearing Union (ACU) in 1974. At the initiative of the UN Economic and Social Commission for Asia and Pacific (UNESCAP), the ACU agreement was signed among five countries represented by its respective central banks (India, Iran, Nepal, Pakistan, and Sri Lanka). The original objective of the ACU was to secure regional co-operation on the settlement of monetary transactions among the members of the Union and to provide a system for clearing payments among the member countries on a multilateral basis. The Asian Clearing Union started its operations in November 1975 with its headquarters based in Tehran, Iran. Since then, the Agreement and the Procedural Rules have evolved to conform to the impending developments and challenges. Bangladesh and Myanmar were the sixth and seventh signatories to this Agreement while Bhutan and Maldives signed the Agreement in 1999 and 2009 respectively²⁴⁴. In 2007, the volume of transactions (one way plus accrued interest) amounted to USD 15,830.5 million depicting a 31.4 percent growth compared to the preceding year²⁴⁵.

Aside from the ACU, there are other regional cooperation initiatives in South Asia. These include mainly the South Asian Association for Regional Cooperation (SAARC) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

2. South Asian Association for Regional Cooperation (SAARC)

South Asian Association for Regional Cooperation (SAARC) is an economic and political organization of the eight countries in Southern Asia namely, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka²⁴⁶. The idea of creating a regional trade bloc consisting of South Asian countries was broached in the 1970s by then Bangladeshi President Ziaur Rahman. However, the idea was only revived in April 1981 when the foreign secretaries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka met for the first time in Colombo identifying five broad areas for regional cooperation. In December 8, 1985, SAARC's Charter was formally adopted. Afghanistan became a member of SAARC in April 2007, at the Association's 14th summit.

SAARC provides a platform for the peoples of South Asia to work together in a spirit of friendship, trust and understanding. It aims to promote the welfare of the peoples of South Asia and to improve their quality of life through accelerated economic growth, social progress and cultural development in the region. The Association promotes interaction on multilateral issues of common concern to its members and has identified areas in which collective positions could be projected at international forums. However, contentious and decisive political issues such as the Kashmir dispute and the Sri Lankan civil war have been excluded from the deliberations of SAARC and are conducted only on the margins of SAARC meetings. SAARC has also refrained itself from interfering in the internal matters of its member states.

In particular, the objectives of the Association as defined in the Charter are:

- to promote the welfare of the people of South Asia and to improve their quality of life;

²⁴⁴ <http://www.asianclearingunion.org/History.aspx>

²⁴⁵ <http://www.asianclearingunion.org/FAQ.aspx>

²⁴⁶ From <http://www.saarc-sec.org/>

- to accelerate economic growth, social progress and cultural development in the region and to provide all individuals the opportunity to live in dignity and to realize their full potential;
- to promote and strengthen collective self-reliance among the countries of South Asia;
- to contribute to mutual trust, understanding and appreciation of one another's problems;
- to promote active collaboration and mutual assistance in the economic, social, cultural, technical and scientific fields;
- to strengthen cooperation with other developing countries;
- to strengthen cooperation among themselves in international forums on matters of common interest; and
- to cooperate with international and regional organizations with similar aims and purposes.

SAARC has functioned basically as an annual event for heads of governments to meet with declarations of cooperation intentions but with limited implementation because of conflict and political difficulties. The last two SAARC meetings however, have succeeded in bringing the countries closer than ever in recognizing the merits of regional cooperation and taking significant actions to realize these benefits. Over the period of 25 years, SAARC is credited for facilitating discussions, which led to the SAARC Preferential Trading Agreement (SAPTA) in 1995, the creation of the SAARC Free Trade Area (SAFTA) in 2004 and the establishment of a SAARC food bank.²⁴⁷

Bhatta (no date, page 5) called the formation of SAARC as a “a landmark step taken by the leaders of the region” to develop a forum for peaceful interaction on matters affecting the region, especially on peace and mutual economic well being of member countries. However, Bhatta’s verdict is that after 19 years of establishment of the SAARC, South Asian member countries have not pushed the process of integration and SAARC itself has not become an organization that could viably promote peace and harmony or prevent conflicts in the region. There is hope though that regional cooperation would be realized because in the last few years SAARC “has taken important steps to expand cooperation among the member countries in the core economic areas due mainly to the force of globalization and economic liberalization within many of the SAARC countries” (ibid., page 5)²⁴⁸.

²⁴⁷ 16th SAARC Summit Declaration, 29 April 2010.

²⁴⁸ Two particularly significant aspects of this development have been the formation of the World Trade Organization (WTO) and the rising vehemence of the Association of Southeast Asian Nations (Bhatta, no date).

3. Bay of Bengal Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)

The BIMSTEC is an international organization involving a group of countries in South Asia (Bangladesh, Bhutan, India, Nepal, and Sri Lanka) and South-East Asia (Myanmar and Thailand), bridging the two sub-regions.

On 6 June 1997, a sub-regional grouping among three South Asian countries (Bangladesh, India and Sri Lanka) and one Southeast Asian Country (Thailand) was formed and given the name BIST-EC (named after Bangladesh, India, Sri Lanka, and Thailand Economic Cooperation). Myanmar attended the inaugural June Meeting as an observer and joined the organization as a full member at a Special Ministerial Meeting in December 1997, upon which the name of the grouping was changed to BIMST-EC. Nepal was granted observer status during the second Ministerial Meeting in December 1998 and was eventually granted full membership in 2004 together with Bhutan. In the first Summit on July 2004, leaders of the group agreed that the name of the grouping should be known as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation or BIMSTEC.

The aims of BIMSTEC are to create an enabling environment for rapid economic development, accelerate social progress in the sub-region, promote active collaboration and mutual assistance on matters of common interest, provide assistance to each other in the form of training and research facilities, cooperate more effectively in joint efforts that are supportive of, and complementary to national development plans of member states, maintain close and beneficial cooperation with existing international and regional organizations, and cooperate in projects that can be dealt with most productively on a sub-regional basis and which make best use of available synergies. BIMSTEC was initiated with the goal to combine the 'Look West' policy of Thailand and ASEAN with the 'Look East' policy of India and South Asia. Hence, BIMSTEC can be viewed as a link between ASEAN and SAARC. Seven members of BIMSTEC covers 13 Priority Sectors led by member countries in a voluntary manner. BIMSTEC's thirteen priority sectors are as follows:

- 1) Trade and Investment, led by Bangladesh
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- 6) Fisheries, led by Thailand
- 7) Agriculture, led by Myanmar
- 8) Public Health, led by Thailand
- 9) Poverty Alleviation, led by Nepal
- 10) Counter-Terrorism and Transnational Crime, led by India
- 11) Environment and Natural Disaster Management, led by India
- 12) Culture, led by Bhutan
- 13) People to People contact, led by Thailand

What makes BIMSTEC different from other organizations is that BIMSTEC attempts to be a unifying force in one of the most diverse regions of the world, be it, way of life, religion, language, and culture. BIMSTEC provides a unique link between South Asia and Southeast Asia bringing together (as of 2008) 1.3 billion people - 21 percent of the world population, a combined GDP of US\$750 billion, and a considerable amount of complementarities. BIMSTEC is working on an FTA and looking forward to a potential US\$ 43 to 59 billion value of trade²⁴⁹.

²⁴⁹ http://www.bimstec.org/about_bimstec.html

4. Other Regional initiatives -Asian Development Bank²⁵⁰

The Charter of the Asian Development Bank (ADB) mandates it to play an active role in regional cooperation in Asia and the Pacific. To institutionalize this role, ADB adopted a regional cooperation policy (RCP) in 1994, which led to various ADB-led regional and sub-regional cooperation programs. In particular for South Asia, the ADB has supported the **South Asia Sub-regional Economic Cooperation (SASEC)** program in July 2000 covering Bangladesh, Bhutan, India and Nepal. ADB also initiated the **Sub-regional Economic Cooperation in South and Central Asia (SECSCA)** program in 2003 to promote transport connectivity and facilitate movement of goods and people across the region. Participating countries are Afghanistan, Pakistan, Tajikistan, and Uzbekistan, with Iran as observer. Turkmenistan is also part of the proposed North-South and East-West Corridors and has been invited to participate in Ministerial Conferences.

The Second Ministerial Conference on Trade and Transport in Central and South Asia in March 2005 approved the establishment of the Central and South Asia Transport and Trade Forum (CSATTF) and the formation of its Trade and Customs Working Group. They also endorsed the Corridor Development Plan for Customs for implementation in 2005–2007.

The Turkmenistan-Afghanistan-Pakistan (TAP) Gas Pipeline Project is an initiative started in 2002, which is expected to transport up to 30 billion cubic meters of natural gas annually from the Dauletabad fields in southeast Turkmenistan about 1,600 kilometers to consumers in Afghanistan and Pakistan. The Asian Development Bank was asked by the three countries to be a development partner and help with the feasibility study for TAP.

²⁵⁰ ADB. "Regional Cooperation and Integration Strategy. July 2006.

ANNEX 2-1 South Asia Exports

Annex Table 1. South Asia Exports.

Year	SAARC Exports			% of Total Exports		Growth Rate (%)		
	Intra	Extra	Total	Intra	Extra	Intra	Extra	Total
2000	2,894,020.78	60,603,596.62	63,497,617.40	4.56%	95.44%			
2001	3,569,284.99	62,459,185.81	66,028,470.80	5.41%	94.59%	18.92%	2.97%	3.83%
2002	3,814,593.64	67,500,997.06	71,315,590.70	5.35%	94.65%	6.43%	7.47%	7.41%
2003	5,554,904.30	79,830,910.70	85,385,815.00	6.51%	93.49%	31.33%	15.45%	16.48%
2004	6,540,156.06	96,512,681.94	103,052,838.00	6.35%	93.65%	15.06%	17.28%	17.14%
2005	8,618,943.26	121,676,186.74	130,295,130.00	6.61%	93.39%	24.12%	20.68%	20.91%
2006	9,642,883.28	147,407,103.72	157,049,987.00	6.14%	93.86%	10.62%	17.46%	17.04%
2007	12,747,482.78	181,826,500.22	194,573,983.00	6.55%	93.45%	24.35%	18.93%	19.29%
2008	13,089,987.08	209,911,613.92	223,001,601.00	5.87%	94.13%	2.62%	13.38%	12.75%
2009	11,701,862.87	189,670,951.13	201,372,814.00	5.81%	94.19%	-11.86%	-10.67%	-10.74%

Source: Direction of Trade Statistics (DOTS) Website, IMF. 2010.

ANNEX 2-2

Regional Trade Agreements in South Asia

1. SAARC Preferential Trade Agreement (SAPTA)

After a decade from the inception of the South Asian Association for Regional Cooperation (SAARC), the first significant economic collaborative agreement in the South Asian region was launched in the form of a SAARC Preferential Trade Agreement or SAPTA.

The SAPTA was agreed upon in December 1995 and was considered groundbreaking, as all negotiations were conducted on an item-by-item basis. Least Developed Countries (LDCs) received preferential treatment in the form of lower tariffs.

Kumar Mukherji (2003), noted that it is the smaller countries which benefitted more in terms of trade gains under the SAPTA. during the period 1996-97 to 2000-01 it has been found that import liberalization by India under SAPTA has stimulated preferential imports from Bangladesh both in value and share terms. In case of Maldives, the share has improved even though the value has declined during the same period

Very little progress was achieved under the SAPTA and with the hope to move to a higher level of trade and economic cooperation, the SAPTA was replaced by a South Asian Free Trade Area (SAFTA) treaty in 2004.

2. South Asia Free Trade Area (SAFTA) Agreement

Replacing the earlier SAPTA, the agreement on SAFTA was signed on January 6, 2004 during the 12th summit of the South Asia Association for Regional Cooperation (SAARC) in Islamabad among Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The Agreement came into force on January 1, 2006. Afghanistan became the eighth member of SAARC during the 14th SAARC Summit.

Under the Agreement, India, Pakistan and Sri Lanka are categorized as Non-Least Developed Contracting States (NLDCS) while Bangladesh, Bhutan, Maldives, Nepal and Afghanistan are categorized as Least Developed Contracting States (LDCS).

The salient features of the four Annexes of SAFTA Agreement are as follows:

a. Rules of Origin:

- For giving preferential access to the Member Countries under SAFTA, the goods shall have undergone substantial manufacturing process in the exporting countries. The substantial manufacturing process is defined in terms of twin criteria of Change of Tariff Heading (CTH) at four-digit Harmonized Coding System (HS) and value content of 40% (30% for LDCSs).
- Apart from the general rules, to provide for Products-Specific Rules (PSR) for 191 tariff lines to accommodate the interest of LDCSs given their limited base for natural resources and undiversified industrial structure. The Products Specific Rules have been provided clearly on technical grounds i.e. where both inputs and outputs are at the same four-digit HS level.

b. Mechanism for Compensation of Revenue Loss (MCRL) for the Least Developed Contracting States:

- The compensation to LDCs, except to Maldives, would be available for four years; to Maldives it would be for six years. The MCRL to Afghanistan, which is due to become a party to the SAFTA, will also be at par with Maldives.
- The compensation would be in the form of grant in US dollar.
- The compensation shall be subject to a cap of 1%, 1%, 5% and 3% of customs revenue collected on non sensitive items under bilateral trade in the base year, i.e., average of 2004 and 2005.

The compensation shall be administered by the SAFTA Committee of Experts as per the Administrative Arrangements defined in the Annex.

c. Technical Assistance to Least Developed Contracting States in agreed areas. The main areas covered are - capacity building in standards, product certification, training of human resources, data management, institutional upgradations, improvement of legal systems and administration, customs procedures and trade facilitation, market development and promotion.

Under the SAFTA, complete trade liberalization is expected by 2016. If successfully implemented, the SAFTA may eventually evolve to a full-fledged South Asia Economic Union

3. Bangladesh-Bhutan-India-Nepal Growth Quadrilateral Initiative (BBIN-GQ)

The BBIN-GQ is a sub-regional initiative being pursued under the SAARC framework. The prime objective of the BBIN-GQ is to promote rapid economic development through the identification and implementation of specific projects in the following sectors: multi-modal transportation and communication, energy, optimal and sustainable utilization of natural resource endowments, trade and investment facilitation and promotion, tourism and environment.²⁵¹

Although the growth quadrangle pursues objectives beyond trade, very little progress has been made in other areas of cooperation such as poverty eradication, social welfare and improvement in the quality of life.²⁵²

4. Bay of Bengal Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)

The BIMSTEC is an international organization involving a group of countries in South Asia (Bangladesh, Bhutan, India, Nepal, and Sri Lanka) and South-East Asia (Myanmar and Thailand), bridging the two sub-regions.

On 6 June 1997, a sub-regional grouping among three South Asian countries (Bangladesh, India and Sri Lanka) and one Southeast Asian Country (Thailand) was formed and given the name BIST-EC (named after Bangladesh, India, Sri Lanka, and Thailand Economic Cooperation). Myanmar attended the inaugural June Meeting as an observer and joined the organization as a full member at a Special Ministerial Meeting in December 1997, upon which the name of the grouping was changed to BIMST-EC. Nepal was granted observer status during the second Ministerial Meeting in December 1998 and was eventually granted full membership in 2004 together with Bhutan. In the first Summit on July 2004, leaders of the group agreed that the name of the grouping should be known as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation or BIMSTEC.

²⁵¹ Mohanty. S.K. 2003. Implications of SAPTA on Intra-Regional Trade Flows of the South Asian Region: An Empirical Assessment.

²⁵² IDE-JETRO. 2004. Sub-Regional Relations in the Eastern South Asia: With Special Focus on Bangladesh and Bhutan

The aims of BIMSTEC are to create an enabling environment for rapid economic development, accelerate social progress in the sub-region, promote active collaboration and mutual assistance on matters of common interest, provide assistance to each other in the form of training and research facilities, cooperate more effectively in joint efforts that are supportive of, and complementary to national development plans of member states, maintain close and beneficial cooperation with existing international and regional organizations, and cooperate in projects that can be dealt with most productively on a sub-regional basis and which make best use of available synergies. BIMSTEC was initiated with the goal to combine the 'Look West' policy of Thailand and ASEAN with the 'Look East' policy of India and South Asia. Hence, BIMSTEC can be viewed as a link between ASEAN and SAARC. Seven members of BIMSTEC cover 13 Priority Sectors led by member countries in a voluntary manner. BIMSTEC's thirteen priority sectors are as follows:

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Chaturvedi (2007)²⁵⁴ however, pointed out that though BIMSTEC identified many specific areas for cooperation, the FTA agreement does not contain specific provisions on trade facilitation, but rather suggests facilitating trade without any explicit elaboration of instruments except with the suggestion to establish mechanisms for rules of origin and for simplification of formalities connected with importation and exportation. Notwithstanding this, there are some suggestions for harmonization of standards; introduction of e-commerce, improving customs cooperation and technical assistance for LDCs in the group.

²⁵³ http://www.bimstec.org/about_bimstec.html

²⁵⁴ Chaturvedi, S., 2007. "Trade facilitation measures in South Asian FTAs: An overview of initiatives and policy approaches", pp. 83-115, Chapter III in ESCAP, Trade facilitation beyond the multilateral trade negotiations: Regional practices, customs valuation and other emerging issues – A study by the Asia-Pacific Research and Training Network on Trade, (United Nations, New York).

ANNEX 2-3

Bilateral Trade Agreements in South Asia

India-Bhutan	Indo-Bhutan economic cooperation stems from a 1949 treaty that creates free trade and commerce between the two countries.
India-Nepal	<p>India is a major investor in Nepal accounting for over 40 per cent of its foreign direct investment and is also the only supplier of fuel to the Himalayan country which shares borders with India and China. India is also Nepal's main trading partner. Bilateral trade was estimated to be 1.8 billion dollars in 2008-09 (April to February)²⁵⁵.</p> <p>Indo-Nepal economic relations began as early as 1950. The agreement was renewed in the years 1954, 1958, 1959, 1960, 1964, 1966, 1971, 1973, 1976, 1978, 1985, 1987, 1990, 1991, 1996, 1999 and 2001. The agreement is governed by the Treaty of Trade, Treaty of Transit and Agreement for Cooperation to Control Unauthorized Trade.</p> <p>These agreements state that, with few exceptions:</p> <ul style="list-style-type: none"> • India will import goods from Nepal without import duty or other restrictions. • India also agreed to the utilization of its port at Vishakhapatnam for movement of transit traffic to and from land-locked Nepal. <p>The two sides discussed security and boundary issues including better ways of manning the border to check drugs and gun-running as well as other criminal activity.</p>
India-Sri-Lanka	<p>The Indo-Sri Lanka Free Trade Agreement (ISFTA) was signed in 1998 and became effective in March 2000. Since the implementation of ISFTA, the India-Sri Lanka trade increased²⁵⁶:</p> <ul style="list-style-type: none"> • Exports of Sri Lanka more than doubled from US\$ 71 million in 2001 to 168 million in 2002. • India's export to Sri Lanka increased from \$604 million in 2001 to \$831 million in 2002. • More importantly, the ISFTA helped in narrowing the trade-deficit for Sri Lanka from 8.6:1 to 4.9:1 • Although the agreement does not directly address investment, it has stimulated new FDI for rubber-based products, ceramics, electrical and electronic items, wood-based products, agricultural commodities and consumer durables. • India emerged as the third largest foreign investor in Sri Lanka with total investment over the last decade approximating US\$ 400 million.
Pakistan-Sri-Lanka	<p>Pakistan is the second largest trading partner of Sri Lanka in South Asia. Sri Lanka was the first country to sign a Free Trade Agreement with Pakistan-the Pakistan-Sri Lanka Free Trade Agreement (PSLFTA), was signed in 2002, but only became operational in June 12, 2005. Under the Agreement both sides offer preferential market access to each other's exports by way of tariff concessions: Sri Lankan businessmen enjoys duty free market access on 206 products in the Pakistani market (including tea, rubber and coconut); on the other hand, Pakistan, enjoys duty free access in the Sri Lankan market on 102 products (including oranges, basmati rice and engineering goods)²⁵⁷.</p>

²⁵⁵ <http://www.earthtimes.org/articles/news/282425,india-nepal-reach-new-trade-treaty.html>

²⁵⁶ Kumar, Nagesh. 2004. South Asia Development Cooperation Report. Research and Information System for the Non-Aligned and Other Developing Countries (RIS).

²⁵⁷ <http://www.pakistanhc.lk/pages/FTA.htm>

Other bilateral FTAs like India-Bangladesh, and Pakistan-Sri-Lanka are under discussion, while the Bangladesh-Pakistan, and Maldives-Sri Lanka are still at the contemplating stage²⁵⁸.

²⁵⁸ Khadria, Binod. 2005. Migration in South and South-West Asia.

ANNEX 2-4
South Asia Intra-Regional Exports, fob

From Country	To Country	2000	2005	2008
Afghanistan		60.2989	102.0353	198.6331
	Bangladesh	1.87166	3.04697	1.3119
	India	22.9318	50.5171	112.64
	Nepal	-	-	-
	Pakistan	35.4881	48.36	84.6812
	Sri Lanka	0.00736	0.1112	-
Bangladesh		93.5904	187.3178	419.8589
	Afghanistan	4.2716	0.8404	2.3183
	Bhutan	0.8991	3.3048	3.1644
	India	50.1293	118.8800	318.8190
	Maldives	-	-	-
	Nepal	1.3167	3.4817	6.0053
	Pakistan	34.5063	52.0022	78.5008
	Sri Lanka	2.4674	8.8087	11.0511
Bhutan		25.2965	95.3451	176.8294
	Bangladesh	4.5342	10.4417	15.0597
	India	20.3250	84.3291	160.7640
	Pakistan	0.4372	0.5743	1.0057
India		1,822.6750	5,312.2684	8,733.0460
	Afghanistan	27.7250	148.3600	358.6830
	Bangladesh	860.3250	1,656.0500	2,574.6600
	Bhutan	2.7250	95.5215	104.7080
	Maldives	20.2750	62.5869	118.6450
	Nepal	143.4000	830.7630	1,543.3900
	Pakistan	163.3250	647.1870	1,549.3800
	Sri Lanka	604.9000	1,871.8000	2,483.5800
Maldives		13.8134	17.1586	19.6473
	Bangladesh	-	-	-
	India	0.2383	1.00185	3.60108
	Nepal	-	-	-
	Pakistan	-	-	-
	Sri Lanka	13.5751	16.1567	16.0462
Nepal		309.2000	547.4000	558.8904
	Afghanistan	-	-	-
	Bangladesh	1.9000	4.0000	79.4675
	India	307.2000	540.1000	475.6890
	Maldives	-	-	0.0080
	Pakistan	0.1000	3.2000	3.6483
	Sri Lanka	-	0.1000	0.0775
Pakistan		404.5653	1,797.3197	2,640.7983
	Afghanistan	121.898	1065.06	1864.99
	Bangladesh	139.346	234.358	269.549
	Bhutan	0.30385	0.24229	0.42426
	India	57.852	337.387	312.5
	Maldives	1.39504	2.9334	5.13656
	Nepal	2.72668	3.60299	3.40843
	Sri Lanka	81.0437	153.736	184.79
Sri Lanka		189.8778	655.4436	519.1132
	Afghanistan	0.17587	2.03911	-
	Bangladesh	10.2222	15.7665	15.4796
	India	58.0334	566.409	382.023
	Maldives	90.9438	27.2693	58.1034
	Nepal	0.80193	0.40379	0.20885
	Pakistan	29.7006	43.5559	63.2983
Total Exports within the Region		2,919.3173	8,714.2884	13,266.8164
Total Exports to the World		60,277.0518	127,255.3407	213,986.8242
% to Total		4.84%	6.85%	6.20%

Source: DOTS-IMF (downloaded from SDDBS-ADB)

Annex Table 3-1. Energy production (kt of oil equivalent)

	2003	2004	2005	2006	2007
Bangladesh	17549	18390	19311	20331	21261
India	394337	407406	420288	435770	450923
Nepal	7795	7969	8158	8349	8527
Pakistan	55360	58851	61257	61354	63643
Sri Lanka	4655	4765	4920	5155	5076

Source: World Development Indicators, 2010

Annex Table 3-2. Commercial Energy Supply of the South Asian countries in 2006 (mtoe)

	Petroleum	Natural Gas	Coal	Hydro-electricity	Nuclear	Total
AFG (2.3)	1.8	0.3	0.1	0.1	0	2.3
BAN (18.5)	4.1	13.7	0.4	0.3	0	18.5
BHU (0.2)	0.1	0		0.1	0	0.2
IND (423.2)	120.3	35.8	237.7	25.4	4.0	423.2
MLD (0.3)	0.3	0	0	0	0	0.3
NEP (1.2)	0.8	0	0.2	0.2	0	1.2
PAK (58.0)	18.4	27.6	4	7.4	0.6	58
SRI (4.2)	3.3	0	0	0.9	0	4.2
TOT (507.9)	149.1	77.4	242.4	34.4	4.6	507.9

Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

Annex Table 3-3. Projected Commercial Energy Supply (mtoe)

Year/ Countries	Crude Oil/ Petroleum Products			Coal			Natural Gas		
	2010	2020	CAGR	2010	2020	CAGR	2010	2020	CAGR
Afghanistan	1.57	3.48	8.28%	0	0	0	0.33	0.92	10.79%
Bangladesh	5.70	11.6	7.36%	0.37	6.58	33.35%	16.79	33.95	7.29%
Bhutan	0.09	0.18	7.18%	0.17	0.17	0%	0	0	0
India	147	267	6.15%	426.94	599.95	3.46%	43.95	81.68	6.39%
Maldives	0.50	0.83	5.20%	0	0	0	0	0	0
Nepal	0.85	1.23	3.74%	0.27	0.32	1.94%	0	0	0
Pakistan	20.60	30.70	4.07%	5.80	15.10	10.04%	35.60	62.50	5.79%
Sri Lanka	5.19	6.34	2.01%	0	7.30	-	0	0	0
Total	174.23	306.28	5.80%	433.55	629.42	3.80%	96.34	178.13	6.34%

Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

Annex Table 3-4. Potential Energy Trade Agreements

Countries	Trade Transaction
India-Nepal	<p>Development of export oriented hydro power projects in Nepal, principally for consumption by India, is potentially a major area for cooperation. The 750 MW SMEC West Seti storage hydropower project is under development by an IPP in Nepal.</p> <p>The Government of Nepal is also pursuing with developers other export oriented hydropower projects like Budhi Gandaki (600 MW), Upper Karnali (400 MW), Kali Gandaki (660 MW), Arun III (800 MW) and Tamakoshi (880MW).</p>
India-Bangladesh	<p>A pre-feasibility study to interconnect the power grids of India and Bangladesh was completed in 2007 for possible exchanges of power between the Eastern grid of India and the Western grid of Bangladesh using a back to back HVDC convertor block and an HVAC link to provide operational flexibility and grid independence with also the possibility to upgrade the power transfer capacity through an additional HVDC convertor block provided the 125 km long HVAC transmission line is provided initially for the ultimate capacity planned. The study proposed connecting Baharampur in India and Ishurdi in Bangladesh through a HVDC back-to-back block of 250 MW capacity at Baharampur in India with upgrade possibility to 500 MW. The current plan is to have the Bangladesh side termination at Bheramara instead of Ishurdi and to have the HVDC convertor block at Bheramara instead of at Baharampur.</p>
India-Sri Lanka	<p>A pre-feasibility study was also completed in 2007 for a power transmission interconnection between India and Sri Lanka through a 50 km long HVDC submarine cable and 385 km of HVDC overhead transmission line with electrical terminations at Madurai on the Indian side and New Anuradhapura on the Sri Lankan side. Technically, the best option would be an interconnection with double circuit HVDC overhead transmission and a double circuit HVDC submarine cable with 500 MW of power planned for exchange in the short term and 1000 MW in the longer term. In view of the difficulty in laying the transmission system it would be techno-economically advantageous to build the transmission system for the ultimate capacity of 1000 MW with the back to back HVDC block provided for 500 MW initially.</p>
India-Pakistan	<p>Given the severe power shortages in Pakistan at present and the open access power transmission possibilities in India, there is now renewed interest to pursue mutually beneficial cross border power transfer between the two countries. In this context it may be possible to reconsider an earlier proposal to erect a 50 km HVDC double circuit transmission line and associated terminal facilities to exchange power between the Dinanath substation near Lahore in Pakistan and the Patti substation in Indian Punjab</p>

Source: Background Report on Regional Energy Trade Constraints and Policy Options Study

Annex Table 3-5. Current Developments in Inter-Regional Energy Trade

Project	Description/Status
Central Asia-South Asia (CASA 1000) power link	<p>The Central Asia Region (Tajikistan, Kyrgyz Republic, Uzbekistan, Kazakhstan and Turkmenistan) is well endowed with energy resources, including hydropower and natural gas, and could export electricity and natural gas surpluses.</p> <p>At a regional conference on electricity trade, organized by the Government of Pakistan in Islamabad in May 2006, Afghanistan, Kyrgyz Republic, Pakistan, and Tajikistan created a joint Multi-Country Working Group to pursue the CASA 1000 project for constructing a transmission line to export about 1000 MW of electricity from Tajikistan and Kyrgyz Republic to Pakistan via Afghanistan (with provision to off-load some electricity in Afghanistan). The country delegations and other stakeholders met in July 2008 to further discuss the CASA 1000 project and recommended that the concession company to be selected should develop, construct and operate the Tajik-Afghan-Pakistan transmission system and also construct the Kyrgyz-Tajik link and that Barki Tajik (Tajikistan) should be the consolidator of power for sale to the power purchasers in Afghanistan and Pakistan. However, the prospects for this project proceeding further have been hampered by conflicts that have arisen between Tajikistan and Uzbekistan.</p> <p>Uzbekistan is opposed to some of the required hydropower expansion in Tajikistan due to resulting downstream water resource constraint concerns. These conflicts have also led to the possibility of Uzbekistan withdrawing from the 500 kV power grid that electrically integrates the CARs.</p>
Iran-Pakistan-India (IPI) natural gas pipeline	<p>The IPI project has remained under discussion for the past couple of decades. This project was originally designed to supply 55 billion cubic meters per year (BCM/y) equivalent to 5.2 billion cubic feet per day (BCF/d) for use by both Pakistan and India and the estimated project cost was of the order of US\$ 7 billion. However, the gas volume to be supplied has recently been revised down to 21 BCM/y (2.0 BCF/d), equivalent to about 19 mtoe/y, to be shared equally between Pakistan and India in a first phase of the project. As a first step, Pakistan is planning to lay a 42 inch diameter 700 km long pipeline to transport only the Pakistan volume of up to 1.0 BCF/d from the Iranian border to Nawabshah in Pakistan, while another section of the same size can be added later as and when India decides to join the project. Iran signed a natural gas export contract with Pakistan on 13 June 2010 to export this volume of natural gas to Pakistan from 2014. The model proposed for funding the project is fundamentally based on an integrated project structure with the Government of Pakistan or a strategic investor taking a lead role in implementing the project. The gas transit charge cash flow would come from the major gas purchasers such as Pakistan State Oil, OGDC, Pakistan Petroleum, Sui Northern Gas Pipelines, and Sui Southern Gas Company.</p>
Turkmenistan-Afghanistan-Pakistan-India (TAPI) natural gas pipeline	<p>The Turkmenistan – Afghanistan – Pakistan – India (TAPI) gas pipeline project has been proposed to bring natural gas from the Dauletabad and adjacent gas fields in Turkmenistan to Afghanistan, Pakistan and India. An ADB funded feasibility study envisaged a 3.2 BCF/d, 56-inch diameter pipeline from Turkmenistan through Pakistan to the Pakistan-India border. The capital cost of the project, originally estimated at US\$ 3.3 billion, has since been revised to US \$ 7.6 billion.</p> <p>The project will take between 4 to 5 years to complete after signing of all contracts. The TAPI parties have initially agreed in-principle to share 2.2 BCF/d of natural gas, equivalent to about 21 mtoe/y, equally between Pakistan and India (about 1.0 BCF/d each) with Afghanistan taking about 0.2 BCF/d. A Gas Pipeline Framework Agreement (GPFA) was initialed in April 2008 by the respective Ministers. However, Turkmenistan internal approval of the GPFA is pending. Continued commitment of the gas by Turkmenistan could be an issue</p>

Project	Description/Status
	given other lucrative markets particularly in Europe. The TAPI route is in extremely challenging terrain and will also have 830 km of the pipeline in Afghanistan posing possible operational constraints. Consequently, the financing risk would be higher than in the case of the IPI pipeline although the market and payment risk would be similar to those for that pipeline.
Myanmar	Myanmar is another energy resource rich neighbor of South Asia. Export oriented hydropower projects with an installed capacity 10,398 MW are reported to be under construction.
Tamanti multipurpose project	India is developing the Tamanti multipurpose project, close to the India-Myanmar border with an installed capacity of 1,200 MW in the first stage and 400 MW and 700 MW in the second and third stages and most of the electricity generated from this project is meant for export to India. In this context, with transmission expansion in Myanmar, the possibility is open for the SMC to negotiate access to electricity generated there to the extent available.
	Myanmar has also invited substantial foreign direct investment for the exploration and development of oil and natural gas fields. In 2007, India proposed to bring in natural gas from Myanmar to India through a pipeline with 180 miles of it passing through Bangladesh and sought a mutually beneficial agreement on the use of the right of way within Bangladesh. Although the annual fee alone for transit through Bangladesh was estimated at US\$ 125 million, the right of way through Bangladesh could not be resolved. Fresh initiatives were taken in November 2009 in the face of exacerbated natural gas constraints faced particularly by Bangladesh with good prospects for resolution of the right of way issue through Bangladesh. However, natural gas availability for the project in Myanmar is now an issue given Myanmar's natural gas commitments to the PRC. It would nevertheless be advantageous for the SMC seeking access to gas reserves in Myanmar to develop necessary basic domestic natural gas pipeline infrastructure, because the concerned SMC could also bring in natural gas in the form of LNG. This would anyway require such pipeline infrastructure to evacuate the natural gas to load centers from the LNG re-gasification terminals.

Annex 4-1. Road Corridors

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
Kabul – Lahore - New Delhi – Kolkata - Petrapole/Benapole – Dhaka - Akhaura/Agartala (3262 kms)	<p>The original SAARC study did not include consideration of corridors involving Afghanistan. Extension of this corridor from Lahore to Kabul is logical given this route represents the main land link from Pakistan to Afghanistan. The effect is to lengthen the corridor by 809 kms, by including the road from Kabul, via Jalalabad to the border with Pakistan at Torkham, and then, in Pakistan, from Torkham to Peshawar to Islamabad and on to Lahore.</p> <p>From Kabul to the border with Pakistan at Torkham, there is a two lane road which is in good or fair condition. On the Pakistan side of the border, the road from Torkham to Peshawar is two lane and in bad condition. The rest of the road Peshawar to Lahore comprises 4 or more lanes and is in good condition. Much of this road is tolled.</p> <p>The border crossing at Torkham is the major transport, shipping and receiving site between the two countries. Some Pakistani trucks are allowed to cross into Afghanistan and deliver cargo direct to Kabul. The process of border clearances appears relatively efficient, with trucks being cleared within one day. However trucks may</p>	<p>At the time of the original SAARC study, physical barriers were identified in terms of the capacity of the infrastructure at the border crossings between Pakistan and India at Wagha, and between India and Bangladesh at Petrapole/Benapole. These capacity constraints are largely the result of the lack of through trucking services and the resulting need to transship goods at the border, which increases the demand for warehousing and storage facilities and for parking space. There is no evidence to suggest that the extent of these physical barriers has decreased since the SAARC study was undertaken. The border crossing at Petrapole (India) was classified as “moderately inefficient” in a study undertaken in 2008, while Benapole on the Bangladesh side of the border was classified as “highly inefficient”.</p> <p>The original SAARC study also identified the section of road between Dharkar and Akhaura in Bangladesh as a physical barrier due to it being single lane and in poor condition. The road section between Wagha and Lahore should now also be added to the list of physical barriers on this corridor as it too is now in bad condition.</p>	<p>The non-physical barriers affecting this corridor are common to all four of the countries through which it passes. These primarily relate to the lack of agreements to allow the smooth movement of freight and/or vehicles between different countries and to delays in cargo clearances, cumbersome documentation and the need to make unofficial payments to accelerate clearances. There appears to have been no change in this situation since the original SAARC study, although the proposed Pakistan-Afghanistan Transit Trade Agreement could represent a significant step forward and might encourage other countries to consider similar measures. The potential benefits of such agreements could be significant. The SASEC Subregional Corridor Efficiency Study (2005) estimated that over 60 percent of the total cost of moving one ton of freight from Kolkata to Dhaka was accounted for by the costs incurred, both officially and unofficially, at the Benapole/Petrapole border crossing. In addition, it estimated that if the non-physical barriers to movement of freight could be removed, the travel time from Kolkata to Dhaka could be reduced from 7-15 days to 2-2.5 days.</p>

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
	<p>have to wait on the Pakistan side of the border before clearing can start. It is reported that security and smuggling at the border crossing are major concerns.</p> <p>While there do not appear to be significant physical barriers to regional cooperation associated with the extension of SHC1 into Afghanistan, there is a significant non-physical barrier in that currently Pakistan does not allow overland trade between India and Afghanistan to pass through its territory. As a result, this trade has to travel by sea through ports in Pakistan or Iran. However, according to recent statement by a Pakistan Government Minister, discussions are ongoing over a Pakistan-Afghanistan Transit Trade Agreement, which would allow transit traffic between Afghanistan and India to pass through Pakistan. It is anticipated that this agreement will be finalized in the next few months.</p>		
Kathmandu – Birgunj - Kolkata/Haldia (1,323 kms)		The SAARC study identified as one of the major constraints in this corridor the long distance involved from Kathmandu to Birgunj on the Nepal-India border and noted that this could be reduced from 276 kms to 120 kms if a new “Fast Track” road were to be built. Although such a road has not yet been built, it is	The SAARC study identified the lack of through bills of lading from shipping lines as a major non-physical barrier with respect to Nepalese import traffic using this corridor, which leads to most containers being unstuffed at Kolkata/Haldia rather than being carried as FCLs to Nepal. Other factors that contribute to this include the limited

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
		<p>reported that the Government of Nepal has proposed that a North-South Fast Track road should be built using a PPP modality.</p> <p>The second physical barrier that was identified in this corridor was the poor condition of around 180 kms of road passing through the Indian state of Bihar, which resulted in trucks having slow down to speeds of around 20 kph with the result that a whole day could be added to travel times. UNESCAP's data base of road conditions on the Asian Highway network now show these roads to be in fair condition, so it appears that this constraint has been relieved at present.</p> <p>A third physical barrier that was identified was the congestion at the border point at Birgunj (Nepal) and Raxaul (India), both of which lack sufficient parking space for vehicles to unload cargoes for customs inspection. As the presence of this physical barrier is closely associated with the efficiency, or otherwise, of customs and other cross-border procedures, some encouragement may be taken from the fact that the study by De et al (see footnote 1), rated Raxaul as "relatively efficient" and Birgunj as "moderately inefficient". If the efficiency of the controls at these posts has improved, then the effect</p>	<p>availability of container transport resources and the reliability of transport services. In addition, high bond requirements and the need to pay facilitation payments in India discourages Nepalese truckers from operating between Nepal and Kolkata/Haldia, even although they may be permitted to under existing agreements while similar problems apply to Indian trucks entering Nepal. This further encourages the practice of transshipping freight at the point where it crosses the international border.</p> <p>Encouraging the improvement of trade facilitation, through the adoption of through bills of lading and standardized customs documentation and the speeding up of customs clearances, appears to be the key to more efficient use of this corridor.</p>

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
		of the infrastructure constraint may have decreased.	
Thimpu – Phuentsholing – Jaigon - Kolkata/Haldia (1,039 kms)		The main physical constraint on this route is the narrow, mountainous road linking Thimpu and Phuentsholing in Bhutan, the nature of which means that six-wheel trucks are limited to carrying a load of only 8 tons. The only other physical constraints on this route are at the border crossing between Phuentsholing and Jaigon, where congestion often occurs due to inadequate parking, and other facilities, on both sides of the border.	The non-physical barriers in this corridor are essentially the same as those affecting Corridor 2, namely the lack of though bills of lading, lack of standardized customs documentation and slow customs clearances. While there is no formal agreement covering the cross-border movement of vehicles between India and Bhutan, such movement is common practice under informal understandings. However, Bhutanese cargoes are reportedly subject to unofficial facilitation payments, which discourage such cross-border movements.
Kathmandu – Kakarvitta – Phulbari – Banglabandha - Mongla (1,314 kms) or Chittagong (1394 kms)		Other than the desirability, as discussed under Corridor 2 above, of shortening the distance from Kathmandu to the East-West Highway though the construction of a “Fast Track” road, there are no major physical barriers in the Nepalese section of this corridor with all of the roads being described as being in good or fair condition, although some bridges are limited to only a single lane. The section of this corridor in India is only 53 kms long. Of this, 21 kms is only single lane and the two kilometer stretch from Phulbari to the Bangladesh border is in bad condition. The Phulabari border post lacks permanent facilities, as	There are several significant non-physical barriers in this corridor. First trucks moving along the Indian section of this corridor can only do so in organized escorted convoys. Second, while Nepalese trucks can travel through India to the border with Bangladesh, they cannot enter Bangladesh so all cargo has to be transshipped at the border. As Bangladeshi trucks cannot enter India, freight moving in the opposite direction must also be transshipped at the Bangladesh-India border. Probably the major non-physical barrier to the effective use of this corridor is India's restriction of traffic between the two countries to bilateral Bangladesh-Nepal trade. Trade with third countries is not allowed to transit India along this corridor which prevents Nepal from using the ports of Chittagong or Mongla for any international trade.

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
		does its counterpart facility at Banglabhanda. In Bangladesh, most of this corridor is reported to be in good or fair condition although there are short sections that are in bad condition. The main physical constraint in Bangladesh is the axle-load limit of 8.2 tons on most roads, other than new roads which have a 10 tons axle-load limit. In addition, weight limitations on some bridges limit the movement of loaded containers by road.	For regional countries to derive full benefit from this corridor, it would be necessary for them to reach a broader transit agreement or agreements which would allow not just bilateral transit traffic to move along the corridor, but also allow third country traffic to use it. However, India may have a vested interest in maintaining the current nature of the agreement as it results in Nepal (and Bhutan) having to use the Indian ports of Kolkata or Haldia for international traffic rather than Mongla or Chittagong in Bangladesh.
Samdrup Jonghar – Shillong – Sylhet – Dhaka – Kolkata (906 kms)		Other than those discussed in relation to the Dhaka-Kolkata section of Corridor 1, the only significant physical barriers on this corridor, which links, eastern Bhutan and the north-east states of India through Bangladesh with the port of Kolkata, are axle-load limit of 8.2 tons on roads in Bangladesh and a load restriction of 6 tons on a bridge on the outskirts of Dawki in India.	The major non-physical barriers affecting this corridor are the lack of agreements to allow the cross-border movement and operation of vehicles in Bangladesh and India and the lack of an agreement to allow Indian goods to transit through Bangladesh, which would result in significant savings for traffic between the north-eastern states of India and the rest of the country, by significantly shortening the distance traveled relative to the current route through the “chicken’s neck”. However, allowing Indian transit traffic to pass through Bangladesh appears to be a highly sensitive and politicized issue, so the prospects for reaching such an agreement are far from clear.
Agartala – Akhaura - Chittagong (227kms)		The main physical barriers on this corridor are the inadequate border crossing facilities at Agartala and Akhaura. In addition, one section of road within Bangladesh linking	The major non-physical barriers on this corridor are those that are common to all road corridors that link India and Bangladesh, namely the lack of bilateral transport and trade agreements that would

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
		Akhaura and Dharkar is only single-lane and in poor condition	allow vehicles and freight to move freely across the international border between these countries.
Kathmandu – Nepalgunj – New Delhi – Lahore – Karachi (2,643 kms)		Between Kathmandu and New Delhi, the only significant physical barrier is a short section of road on the Indian side of the border which is only single-lane but in fair condition. In India, the corridor running west from New Delhi passes along National Highway 1, much of which is of four or more lanes and tolled. As discussed under Corridor 1, the border crossing between India and Pakistan at Wagha poses a physical barrier due to inadequate facilities resulting in congestion and long waiting times. Within Pakistan, the road section from Wagha to Lahore is in bad condition, as is some 138 kms of the four lane road between Rohri and Hyderabad.	The main non-physical barriers on this corridor are the lack of bilateral, or wider, transport and trade agreements governing the cross-border movement of vehicles and the cross-border movement of goods, either bilaterally or in transit. Vehicles do move between Nepal and India, and vice versa, under existing informal agreements but the extent of the permitted movement is limited. No vehicles can move between India and Pakistan so all freight must be transshipped.
Thimpu – Phuentsholing – Jaigon – Burimari – Chittagong (966 kms) or Mongla (880 kms)		Much of this corridor linking Thimpu in Bhutan to Chittagong or Mongla in Bangladesh is common to Corridors 3 and 4. Other than the physical barriers already identified along those corridors, the only additional barrier on this corridor is the lack of facilities at the Burimari border post in Bangladesh, where all goods have to be transshipped.	The major non-physical barriers on this corridor are essentially the same as those associated with Corridor 4. While trucks from Bhutan can enter India under informal arrangements, neither they nor Indian trucks can enter Bangladesh with the result that all goods must be transshipped at the Burimari border crossing, which was described by De et al as “highly inefficient”. In addition, India only allows bilateral Bhutan-Bangladesh traffic to pass through its territory which prevents Bhutan from

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
			using this corridor for third country trade, which has to pass through Kolkata or Haldia.
Maldha – Shibganj – Jamuna Bridge (252 kms)		The main physical barriers on this corridor are a 13 kms section of road on the Indian side of the border which is not at full two lane standard and is in poor condition, and longer section on the Bangladeshi side which is also less than two lane standard. The axle-load limit of 8.2 tons in Bangladesh also imposes a constraint on the use of this corridor. In addition, border crossing facilities at Mehdipur are inadequate.	As discussed above, there are no agreements covering cross-border movements of vehicles or freight between India and Bangladesh, with the result that all freight traffic must be transshipped at the border.
Kathmandu – Bhairahawa – Sunauli – Lucknow (663 kms)		There appear to be no major physical barriers along this corridor other than the lack of border facilities on the Nepal side of the border and the inadequate border facilities on the Indian side of the border, where goods are unloaded for checking.	As with Corridors 2 and 7, the main non-physical barriers on this corridor are the lack of bilateral transport and trade agreements governing the cross-border movement of vehicles and the cross-border movement of goods between India and Nepal. Vehicles do move between Nepal and India, and vice versa, under existing informal agreements but the extent of the permitted movement is limited and precludes long- or medium-haul transport activities.
Kandahar – Speenboldak – Chaman – Quetta – Karachi (921 kms)	The addition of this corridor to the 10 road corridors considered under the earlier SAARC study is the result of the expansion of coverage of this study to include Afghanistan. While the extension of Corridor 1 from Lahore to Kabul covered access to northern and western	In Afghanistan, the 105 kms of road between Kandahar and Speenboldak, on the Afghanistan side of the border with Pakistan, is two lane and in good condition. From Chaman, on the Pakistan side of the border, the road to Quetta is two lanes but 104 kms of the total	Security is understood to be a major concern in relation to the use of this corridor and smuggling across the border is a major problem. Trucks carrying commercial freight are not allowed to cross this border. All freight has to be unloaded and transshipped in the “no man’s land” between the two border posts. The

Road Corridor	Description	Physical Barrier	Non-Physical Barrier
	<p>Afghanistan through Kabul, it does not offer a logical route for access to the south and west of the country. Accordingly, it is necessary to consider a corridor that provides the southern parts of Afghanistan with access to the wider South Asian region.</p> <p>This corridor links Kandahar, Afghanistan's second city, with Quetta, the capital of Balochistan Province in Pakistan and on to Karachi and its port facilities, where the corridor links up with Corridor 7.</p>	<p>length of 129 kms is in poor condition. From Quetta to Karachi the road is also two lanes, but 252 kms of the total of 687 kms is in bad condition and 175 kms is in fair condition. Only 160 kms is reported to be in good condition.</p> <p>No information is available on the facilities at the border crossing, or their capacity. However, it is reported that around 100 trucks use the crossing each day for the carriage of military supplies into Afghanistan.</p>	<p>potential for linking Afghanistan with India through this corridor and Corridor 1, or other routes, is currently constrained by the non-physical barrier imposed by Pakistan on transit trade between India and Afghanistan. However, as noted in footnote 14 above, this barrier may soon be removed.</p>

Source: Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector.

Annex 4-2. Rail Corridors

Rail Corridor	Description	Physical Barrier	Non-Physical Barriers
Lahore – Delhi – Kolkata – Dhaka – Imphal (2830kms)	<p>This corridor running from Lahore in Pakistan through India and Bangladesh to Imphal in north-east Indian state of Manipur is the most significant regional railway corridor in South Asia. The corridor is served by broad gauge track for most of its length apart from through the eastern part of Bangladesh where it is on meter gauge.</p> <p>The main interchange point on this corridor between India and Pakistan is at Attari-Wagha and the exchange of passenger and freight traffic is governed by a bilateral agreement dating from 1976. Freight traffic on this section of the corridor is carried both in full train loads and in part train loads in wagons attached to passenger trains. Most of the freight traffic originates in India and most of the freight trains and wagons return empty from Pakistan. The bilateral agreement limits the type of wagon that can be used for cross-border movements and this has the effect of restricting the growth of traffic, particularly containers. A bi-weekly passenger service operates</p>	<p>Although all of this corridor once constituted part of one integrated railway system, differences in the direction and pace of the evolution of Indian Railways, Pakistan Railways and Bangladesh Railways in recent decades mean that there now several significant physical barriers to the effective use of this corridor for regional transport, some of which relate to track and some of which relate to rolling stock. The SAARC report presented extensive details of these physical barriers and there is no evidence of significant changes in the situation in recent years.</p> <p>Briefly, in relation to track, changes in gauge are a problem on this corridor as it passes through Bangladesh with broad gauge track on the west side of the Jamuna River, dual gauge track on the sections adjacent to the Jamuna Bridge and towards Dhaka and meter gauge in the west of the country. In addition, there is a load restriction on the Jamuna Bridge which prohibits the movement of broad gauge fully loaded wagons across the bridge.²⁵⁹</p>	<p>The SAARC study concluded in 2006 that the non-physical barriers to inter-country and inter-regional rail traffic along this corridor were minor compared to the physical barriers that had been identified. There is no evidence to suggest that this situation has changed.</p> <p>The main non-physical barriers in this corridor remain the limitations on the type of wagons that can move between India and Pakistan and India and Bangladesh. In both cases, this limitation is specified in the existing bilateral rail agreement between the respective countries. As noted above, this limitation impacts on the nature of freights than can be moved by rail across the international borders and, in particular, precludes the use of rail for international movements of containers.</p> <p>The other significant non-physical barrier in this corridor is Bangladesh's unwillingness to allow traffic between India's north-eastern states and the rest of the country to transit through its territory.</p>

²⁵⁹ Recent investigations suggest that fully loaded ISO containers could be moved safely across the Jamuna Bridge if carried on low platform flat cars, as operated by Indian Railways container subsidiary, CONCOR

Rail Corridor	Description	Physical Barrier	Non-Physical Barriers
	<p>between India and Pakistan under the terms of the bilateral agreement, although it has been suspended periodically due to security concerns.</p> <p>The interchange point between India and Bangladesh is at Gede-Darshana. Freight traffic between the two countries is almost entirely unidirectional with full trains running from India into Bangladesh and empty ones moving in the opposite direction. A passenger service has recently commenced operation between Dhaka and Kolkata.</p> <p>In Bangladesh, the corridor is served by broad gauge, dual gauge and meter gauge sections, while once the corridor crosses back into India, the track is all broad gauge. There is no through traffic from Kolkata to the north-eastern Indian states.</p> <p>In the event that the proposed broad gauge railway link between Torkham, in Pakistan, and Kabul in Afghanistan is constructed, then this corridor could extend from Lahore across Pakistan and into Afghanistan. A Memorandum of Understanding between the two countries covering the construction of this link, and another between Chaman and Kandahar, was</p>	<p>Within India there are several sections of the corridor where traffic is approaching, or has reached, saturation levels. In Pakistan, the lack of electrification on the section of track between Wagha and Lahore precludes the through movement of locomotives from India to Pakistan.</p> <p>With respect to rolling stock, freight movements between India and Pakistan and between India and Bangladesh are both restricted to a specific type of wagon which in turn restricts the types of freight that can be carried. In particular, it precludes the carriage of containers, petroleum products, and coal and other minerals across these international borders. In addition, Indian Railways locomotives and wagons are air-braked while those in Pakistan and Bangladesh are not, which further constrains the cross-border movement of freight wagons.</p>	

Rail Corridor	Description	Physical Barrier	Non-Physical Barriers
	reportedly signed in July 2010, and work on the proposed project is scheduled to start in the near future.		
Karachi – Khokhrapar – Munabo – Jodhpur (707 kms)	<p>This rail corridor linking the port city of Karachi in Pakistan and Jodhpur in India offers broad gauge connectivity between the south of Pakistan and the entire Indian railway network and, potentially, on to Bangladesh and Nepal. In addition, if the proposed railway link between Chaman in Pakistan and Kandahar in Afghanistan is constructed, this corridor could be extended from Karachi through Quetta to Kandahar, thereby offering improved regional connectivity for southern and western Afghanistan.</p> <p>The rail link through the Karachi-Jodhpur corridor is relatively new, having only been commissioned in February 2006.</p>	The physical barriers on this rail corridor relate to the facilities on either side of the international crossing between Khokhrapar in Pakistan and Munabo in India. At present, facilities are limited to those for passengers only. There are no facilities for handling cross-border movements of freight, which clearly severely restricts the potential usefulness of this corridor. If facilities for handling freight movements were to be developed, this rail link could offer the hinterland of north-west India the possibility of using Karachi as an alternative to Mumbai for its maritime gateway.	The bilateral agreements covering cross-border movements on this corridor is limited to passenger services only. As noted above, this seriously limits the potential usefulness of this corridor. If the bilateral agreement were to be extended to cover the movement of freight along this corridor more of its potential could be realized, particularly if it also allowed for third country transit through India to/from Nepal and Bangladesh
Birgunj – Raxaul – Kolkata (804 kms) or Haldia (832kms)	This corridor offers a broad gauge connection between the Inland Container Depot (ICD) at Birgunj in Nepal and the ports of Kolkata and Haldia in India. Around 95 percent of rail traffic to/from Nepal passes through this corridor. Although container movements on this corridor were initially restricted to third country traffic, bilateral container movements between	The main physical barrier on this corridor result from the fact that it utilizes some of the busiest sections of Indian Railways network, which can result in delays and excessive transit times.	The non-physical barriers on this corridor are primarily due to slow processing of customs and other documentation at Birgunj ICD and at Kolkata/Haldia.

Rail Corridor	Description	Physical Barrier	Non-Physical Barriers
	India and Nepal are now permitted. In addition to container traffic, third country bulk movements are also permitted on this corridor.		
Birgunj – Katihar-Chittagong Port (1,146 kms)	This corridor provides a link between Nepal through India to Bangladesh and, potentially, to the north-eastern states of India. The corridor is single track in many places and comprises a mixture of broad gauge, dual gauge and meter gauge track. At present, the corridor handles inter-country traffic between India and Bangladesh and, where the corridor overlaps with Corridor 3, third country traffic moving between Kolkata/Haldia and Birgunj ICD. Freight traffic between India and Bangladesh is essentially unidirectional with train loads of several commodities moving from India to Bangladesh, but the return traffic comprising largely empty wagons.	<p>Capacity constraints exist on several sections of this corridor as it passes through India. At the interchange between India and Bangladesh, differences in operating practices on the two railway systems mean that marshalling of trains is required. Marshalling capacity on the Bangladesh side of the interchange is inadequate, which leads to delays.</p> <p>In Bangladesh, changes in gauge create difficulties for the through movement of traffic, which requires transshipment. In addition, there are capacity and speed limitations on several sections of the corridor.</p> <p>The most significant capacity limitation is that on the Jamuna Bridge, which cannot carry fully loaded broad gauge wagons or containers. As a result, much of the inter-regional traffic coming from India is unloaded from the railway to the west of the Jamuna Bridge and then moved by road to its final destination.</p> <p>At present, there is no rail link between Akhaura (Bangladesh) and Agartala (India), which precludes this corridor from currently providing rail</p>	<p>With respect to movements between India and Bangladesh, the non-physical barriers on this corridor are essentially the same as those affecting Corridor 1.</p> <p>The potential for Nepal to use this corridor for international trade through the port of Chittagong is restricted by the fact that its transit agreement with India only allows for the movement of bilateral trade between Bangladesh and Nepal, not third country trade.</p>

Rail Corridor	Description	Physical Barrier	Non-Physical Barriers
		access to India's north-eastern states.	
Colombo – Chennai (1,052 kms)	A rail service along this corridor operated from 1940 to 1984, with the link between the Indian and Sri Lankan railway networks being provided by a ferry. However, services were only possible for about six months each year due to the effects of the monsoon season. Services along this corridor were suspended due to the security situation in Sri Lanka.	The main physical barrier that would need to be overcome if services are to resume along this corridor relates to the ferry link between Sri Lanka and India. For the corridor to be worthwhile, the ferry service must be operational on a year round basis with a reasonable degree of reliability. The route used previously for the ferry link is too shallow to allow the operation of modern vessels and alternative ferry routes need to be examined.	<p>When the SAARC report was prepared, the major non-physical barrier to the use of this corridor was seen to be the security situation in Sri Lanka. This situation has now stabilized and should no longer present a barrier to the development of this corridor.</p> <p>The remaining non-physical barrier that needs to be addressed is the need to revive and/or revise the bilateral agreement between the two countries on the operation of rail services on the corridor.</p>

Source: Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector.

Annex 4-3. Inland Waterway Transport

Corridor	Description	Physical Barrier	Non-Physical Barrier
Kolkata-Haldia-Mongla-Barisal-Narayanganj-Sirajganj-Chilmari-Pandu (1,439 kms)	<p>This inland waterway corridor starts in at Kolkata in India passes along the Bagirath and Hooghly Rivers to the border with Bangladesh, traverse Bangladesh by way of the Sunderbahns and several major rivers including the Padma, Jamuna and Brahmaputra rivers and ends at Pandu, on the upper reaches of the Brahmaputra, in the north-eastern states of India. The fact that this corridor passes through the Sunderbahns in both India and Bangladesh means that its use is environmentally sensitive.</p> <p>Traffic on this corridor tends to be low value, non-time sensitive commodities Traffic levels have fluctuated over recent years, probably due to a combination of draft restrictions on the many sections that are subject to high levels of siltation and bank erosion, and delays in the renewal of the bilateral protocol between India and Bangladesh covering the use of the corridor. The protocol allows for this corridor to be used for Indian transit traffic.</p>	<p>The main physical barriers on the corridor are the draft restrictions that result from the high rate of siltation and form bank erosion. Extensive dredging is required to maintain the navigable depths on the relevant waterways. However funding for such dredging has not been available. In addition to depth restrictions, major parts of the corridor suffer from other navigational hazards such as narrow channels and lack of navigation aids.</p> <p>The condition of piers, jetties and other infrastructure along the corridor is generally poor, as is the availability of cargo handling equipment and storage. There are no facilities for handling containers on the piers.</p>	<p>Movement of vessels along the corridor takes place within the provisions of a bilateral protocol that was originally signed in 1999. However, when the original protocol expired, no long term extension was signed and the protocol was for a long time renewed only on a month-by-month basis. Given the uncertainty that this generated, and the fact that one month offered insufficient lead time for shippers to book cargoes and vessels, the number of vessels using the corridor and the volume of cargo carried fell sharply. The protocol has now been renewed on a long term basis.</p> <p>A further non-physical barrier is a limitation, imposed by the Bangladesh government, on the handling of imports of cotton yarn and rice at locations other than at the port of Chittagong. It is reported that this restriction was a major reason why a proposal, by a joint venture company in 2005, to develop container transport using inland waterway transport failed to get off the ground, despite initial support from potential customers.</p>
Kolkata-Haldia-Mongla-Barisal-Narayanganj-Bhairababbazar-	This corridor follows the same route as Corridor 1, as described above, until it reaches	The physical barriers to the use of this corridor are essentially the same as those affecting Corridor 1. However,	The non-physical barriers affecting the use of this corridor are the same as those affecting the use of Corridor 1.

Corridor	Description	Physical Barrier	Non-Physical Barrier
Markuli-Fenchugan-Karimganj (1,318 kms)	Narayanganj. After this point the corridor follows the Megna and Kusiara rivers in a north-easterly direction.	the draft restrictions on some sections are so severe that all navigation has to be discontinued for around five months in every year.	

Source: Addressing Binding Constraints to Regional Cooperation and Integration in Selected Areas – Transport Sector.

Annex Table 5-1. Remittance Inflows

Year/Country	Bangladesh	India	Maldives	Nepal	Pakistan	Sri Lanka
1990	778.87	2,383.74	1.70	..	2,006.27	400.78
1991	769.37	3,289.11	1.80	..	1,548.70	442.09
1992	911.76	2,897.43	1.60	..	1,573.62	547.81
1993	1,007.38	3,522.79	1.30	54.83	1,446.28	632.38
1994	1,150.88	5,856.69	2.17	50.12	1,749.28	715.19
1995	1,201.66	6,223.00	2.37	56.82	1,712.22	808.95
1996	1,344.66	8,765.69	2.71	44.16	1,284.05	851.58
1997	1,526.50	10,330.96	2.45	49.46	1,707.28	942.39
1998	1,606.08	9,479.30	2.45	67.50	1,172.00	1,023.46
1999	1,806.79	11,124.28	2.20	83.46	996.00	1,072.39
2000	1,967.53	12,883.47	2.20	111.50	1,075.00	1,165.83
2001	2,104.55	14,273.02	1.82	146.99	1,461.00	1,184.99
2002	2,858.06	15,735.74	2.01	678.49	3,554.00	1,309.08
2003	3,191.67	20,999.15	2.01	771.07	3,964.00	1,437.75
2004	3,583.82	18,750.38	2.90	822.61	3,945.00	1,589.57
2005	4,314.50	22,125.09	2.26	1,211.82	4,280.00	1,990.74
2006	5,427.52	28,333.64	2.80	1,453.23	5,121.00	2,184.77
2007	6,562.32	37,216.73	2.98	1,733.86	5,998.00	2,526.70
2008	8,995.00	49,940.82	3.13	2,727.14	7,039.00	2,947.40

Source: Migrant Remittance Flows: Findings from a Global Survey of Central Banks. 2010.

Annex Table 5-2. Remittance Outflows

Year/Country	Bangladesh	India	Maldives	Nepal	Pakistan	Sri Lanka
1990	..	105.59	8.22	..	0.65	..
1991	..	51.58	17.14	..	0.51	..
1992	..	67.78	19.30	..	0.56	..
1993	..	259.42	26.81	3.01	0.98	..
1994	..	350.83	22.46	8.71	1.87	..
1995	..	419.17	26.77	9.06	4.41	16.19
1996	0.79	537.99	27.46	17.99	3.56	16.15
1997	1.71	161.58	28.15	21.80	1.92	17.42
1998	2.56	44.16	30.81	24.06	5.00	18.03
1999	3.70	36.17	40.88	26.95	3.00	18.72
2000	4.38	486.14	46.35	16.73	2.00	19.69
2001	3.70	751.08	49.96	24.30	3.00	193.58
2002	5.73	1,186.80	50.62	34.09	2.00	209.57
2003	7.07	1,265.42	55.32	26.19	5.00	230.14
2004	7.74	1,652.78	61.51	63.61	10.00	236.15
2005	5.46	1,348.28	69.91	65.79	3.00	256.85
2006	3.32	1,561.87	83.55	79.17	3.00	282.60
2007	2.81	2,059.34	105.63	3.95	2.00	314.25
2008	15.19	3,815.30	128.92	5.29	2.00	384.90

Source: Migrant Remittance Flows: Findings from a Global Survey of Central Banks. 2010.

Annex Table 5-3. Current Account Balance

	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
1990		-1.32		-2.22	4.58	-7.97	-4.15	-3.71
1991		0.21		-1.60	-3.67	-7.76	-2.79	-6.61
1992		0.57		-1.83	-6.89	-5.33	-3.86	-4.64
1993		1.08		-0.68	-16.69	-6.08	-5.63	-3.70
1994		0.59		-0.52	-3.12	-8.65	-3.49	-6.46
1995		-2.17	-11.60	-1.56	-4.55	-8.10	-5.52	-5.91
1996		-2.44	-11.90	-1.53	-1.65	-7.22	-7.01	-4.91
1997		-0.68	-7.60	-0.72	-6.83	-7.89	-2.74	-2.62
1998		-0.08	10.60	-1.66	-4.05	-1.38	-3.61	-1.44
1999		-0.80	2.20	-0.72	-13.40	-1.56	-1.46	-3.59
2000		-0.65	5.40	-1.00	-8.25	-2.38	-0.11	-6.39
2001		-1.14	-8.80	0.30	-9.39	-2.94	2.60	-1.37
2002	-3.20	1.55	-14.90	1.39	-5.55	3.56	5.33	-1.38
2003	3.00	0.25	-21.80	1.46	-4.52	2.85	4.29	-0.37
2004	1.70	-0.49	-17.00	0.11	-15.75	1.37	-0.83	-3.13
2005	0.30	-0.29	-28.40	-1.27	-36.41	1.88	-3.29	-2.66
2006	-2.40	1.93	-4.20	-1.02	-32.52	1.65	-5.29	-5.30
2007	-1.20	1.25	11.70	-0.96	-41.49	0.06	-5.79	-4.33
2008	-1.50	1.30		-3.11	-51.64	5.81	-9.36	-9.31

Source: World Development Indicators, accessed August, 2010;
ADB Key Indicators 2009 for Afghanistan and Bhutan figures.

Annex Table 5-4. Trade Balance

	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
1990	0.00	-7.41	-4.07	-1.42	2.83	-11.13	-7.83	-7.88
1991	0.00	-5.56	-8.18	0.00	-5.93	-11.69	-1.56	-10.11
1992	0.00	-4.76	-25.17	-0.76	-5.28	-9.78	-3.17	-9.26
1993	0.00	-5.09	-12.96	0.02	-12.60	-10.32	-6.13	-9.55
1994	0.00	-4.86	-10.58	-0.31	-1.47	-12.44	-2.76	-11.81
1995	0.00	-6.48	-5.14	-1.19	15.46	-9.54	-2.71	-10.44
1996	0.00	-7.61	-10.70	-1.17	18.62	-12.82	-4.52	-8.93
1997	0.00	-6.02	-10.90	-1.25	12.77	-11.38	-4.69	-7.06
1998	0.00	-4.95	-17.29	-1.68	16.65	-11.07	-1.04	-6.01
1999	0.00	-5.47	-20.69	-1.95	10.58	-6.87	-1.61	-7.78
2000	0.00	-5.25	-20.83	-0.92	17.85	-9.14	-1.25	-10.61
2001	0.00	-6.12	-20.81	-0.89	16.86	-9.07	-1.05	-6.24
2002	-31.04	-4.77	-18.78	-1.00	20.82	-10.76	-0.09	-6.51
2003	-48.90	-5.82	-18.55	-1.29	21.96	-12.85	0.59	-6.03
2004	-47.31	-5.35	-21.98	-1.81	11.14	-12.78	1.03	-8.82
2005	-46.06	-6.46	-24.58	-2.83	-34.68	-14.90	-3.87	-8.93
2006	-41.15	-6.27	-15.25	-3.04	-17.64	-17.87	-7.99	-11.00
2007	-39.31	-6.93	-4.52	-3.56	-20.77	-18.25	-7.15	-10.38
2008	-35.51	-8.41	4.81	-5.35	-26.57	-20.58	-11.00	-13.42

Source: World Development Indicators, 2010