Chapter 10

Connectivity and Regional Co-operation in South Asia

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10.1 Introduction

One of the major challenges facing South Asia in deepening regional integration and increasing competitiveness is poor quality and inefficient national and international infrastructure services, both hardware and software, which raise costs of transportation and production and constrain the capacity of the South Asian economies to gain from a liberal trading environment, regional or otherwise. The South Asian region, with its geographical contiguity, has great potential for co-operation in the area of connectivity.

The importance of tariffs as barriers to trade has gradually reduced; however, high-tariffs still exist for certain sensitive products, and there is a strong presence of non-tariff barriers (NTBs) including high border transaction costs in the region. High transportation costs, poor institutions, inadequate cross-border infrastructure, and the absence of a regional transit trade are some major barriers penalising the region's trade and integration.[1] A wide range of current trade barriers are purely policy-induced barriers, such as high sensitive lists, complicated NTMs, etc.

From a trade perspective, and in order to forge greater regional integration in South Asia, there is a need to reduce the elements of trade costs. Despite falling tariffs, geographical proximity, and economic and cultural similarities, higher trade costs have meant trade in South Asia has not grown. The cost of trade transportation increases if the country is landlocked (e.g. Afghanistan). The land border in South Asia is overcrowded and needs special attention in order to reduce time delays and transaction costs. Therefore, the estimated 138 per cent intra-regional trade costs (tariff equivalent) for South Asia appear to be very high (Duval and Uthoktham 2010). Higher trade costs not only restrict trade but also downplay the political will to form greater regional co-operation.

It is against this backdrop that this chapter attempts to identify the prospects and challenges for regional connectivity and trade facilitation in South Asia. It identifies the contours of the potentials for regional co-operation in regional connectivity and trade facilitation and provides some policy perspectives.

10.2 An overview of regional connectivity in South Asia

In South Asia, the maritime and aviation sectors are relatively well connected to their respective global networks. There is also a higher degree of private sector involvement in developing and managing infrastructures. Tremendous efficiency gains could be

realised by removing physical and non-physical barriers to transport and improving intermodal connectivity. Both of these steps would improve the efficiency of transport services and raise the utilisation rates of existing infrastructure.

10.2.1 Maritime transport

Since the 1990s, the container terminals in South Asia have been handling increasing volume of cargoes, dominated by Indian container terminals. However, none of the world's top ten busiest container ports is from South Asia. Asia's most important liner routes, by volume, still run from Asia to Europe and North America. There has been a substantial increase in intra-Asian shipping, particularly between India and South East and East Asian countries. Driven by trade between India and China, containerised trade in South Asia has also been growing rapidly.

Almost none of the coastal countries in South Asia is now linked by direct shipping services. Transshipment through hub ports (e.g. Colombo or Singapore) is the only option for linking with South Asian markets. Shipping connectivity is still poor in South Asia. On top of this, the three landlocked countries and one island country in South Asia depend on transit ports in neighbouring countries for their trade. The United Nations Conference on Trade and Development (UNCTAD) Liner Shipping Connectivity Index shows that between 2006 and 2011 shipping connectivity increased markedly in a number of the South Asian economies, such as Sri Lanka, Pakistan and India, while it deteriorated for Maldives. A UNESCAP study which analysed differences in trade costs found that liner shipping connectivity accounts for about 25 per cent of the changes in trade costs that are unrelated to non-tariff policies.[2] Thus, those countries which have witnessed a decline in liner shipping connectivity are likely to have faced higher trade costs.

South Asian countries can achieve economies of scale through collective shipping arrangements. To start with, liner shipping services can be routed between the ports of Sri Lanka, Pakistan, Bangladesh and India, and also the ports in neighbouring countries in South East Asia and the Middle East. A regional commission in South Asia may be set up for exchanging information on regulations and encouraging competition of shipping services. There is further scope to improve connectivity, particularly for landlocked countries, through reduction of trade processes and procedures at transit ports. A faster port not only increases the productivity of the home country but also improves the competitiveness of traded goods, more importantly the goods in transit for landlocked countries.

10.2.2 Air transport

Air freight in South Asia reached 2,452.99 million ton-km in 2010, this was an increase of about 10 per cent per annum since 2000.[3] Aircraft departures in South Asia have increased by about 8 per cent per annum in the 2000s. However, changes in air transportation performance remain uneven across South Asian countries.

Capital cities in South Asia are unconnected by direct airlines. For example, Delhi and Islamabad or Dhaka and Islamabad are yet to have direct flights between them. Even though bigger nations have direct air links for passengers and freight in South

Asia, smaller nations, more importantly landlocked and island countries, heavily depend on neighbouring countries for air transportation.

Increasing connectivity boosts traffic. One study suggests that improvements in air connectivity have resulted in a 22 per cent increase in global traffic.[4] Air traffic in South Asia is poised to continue to grow strongly. For the period 2010–20, the International Civil Aviation Organization (ICAO) estimates that passenger aircraft movement will increase annually by about 5 per cent, while between 2010 and 2014, passenger traffic on many intra-South Asia routes is projected to increase annually by about 10 per cent.[5] The increasing demand for air transportation is not adequately met by the existing infrastructure in the region. This will require the region to mobilise investments, and will need to be supported by appropriate regional policies to air transportation and connectivity.

10.2.3 Land transport

Inter-country land transport linkages are particularly underdeveloped in South Asia. There is high potential for improving road conditions since many South Asian countries still have a substantial length of unpaved roads. Governments have invested in major national roads as well as rural road networks. Some major rural road development initiatives have been implemented in, for example, Bangladesh, India and Sri Lanka. The Intergovernmental Agreement on the Asian Highway Network, adopted under the auspices of UNESCAP on 18 November 2003, established technical specifications for the regional road network. The Asian Highway Network now extends through 32 member states and comprises 142,000 km of highways. Currently, about 32 per cent of the network is classified as meeting Primary and Class I standards, the two highest categories of road class.

There are still 11,500 km of Asian highway routes that need to be upgraded to meet the minimum standards. The poor quality of some road segments is a deterrent for international transport because it increases transport time and operating costs for vehicles. Countries are also struggling to maintain their Asian highway routes due to limited finances and institutional capacity. Furthermore, as in the case of other infrastructure networks, it is often difficult to fund cross-border projects unless such projects are part of a broader integration strategy, such as the Almaty–Bishkek Regional Road Rehabilitation project funded by the Asian Development Bank (ADB) under the Central Asia Regional Economic Cooperation (CAREC) programme, or more recently the Northern Economic Corridor of the Greater Mekong Subregion (GMS). This underlines the critical role played by regional co-operative frameworks, such as the Intergovernmental Agreement on the Asian Highway Network, as well as the many subregional initiatives promoted by subregional organisations and multilateral financing institutions.

Railways face the challenge of missing links, which prevent the network from functioning as a continuous system. According to UNESCAP estimates, member countries constitute about 10,500 km of rail track, mostly located in the Association of Southeast Asian Nations (ASEAN) subregion. While these links can be filled by transshipments to carriages, shippers are discouraged from using rail because of

the longer transit time and higher costs. In addition, interoperability across borders remains a problem. In South Asia, there are some successful bilateral arrangements for passenger and freight trains between countries. There are two good examples of passenger trains operating in the region: (i) Maitree Express between Kolkata and Dhaka, and (ii) Samjhauta Express between Delhi and Lahore. More passenger and freight trains could be made operational with investment from Bangladesh, India and Pakistan.

Given the expected growth in intra-regional trade, as well as the heightened awareness about the transport sector's contribution to climate change, the railways could capture a greater proportion of intra-regional transport, particularly for freight. But there is a need to show this potential, for example, through demonstration runs of container trains.[6] Countries in South Asia can also increase rail connectivity by developing more inland container depots and dry ports with rail connections. Afghanistan, Nepal and Bhutan and inland parts of India and Pakistan should set up more container depots and dry ports. Nepal has been successfully running a container depot at Birgunj (mainly for Nepal's international traffic) and another one is coming to Kakarvitta (to facilitate Nepal's trade with the eastern South Asia subregion). The same model can be extended to other parts of South Asia such as in Bhutan and Afghanistan.

10.2.4 Cross-border infrastructure services

A cross-border transport network enlarges market size and helps economies to grow further through increased trade and production. Some examples are the GMS corridors, India–Bhutan hydropower projects, Lao PDR–Thailand hydropower projects, among others. Cross-border infrastructure projects are a popular and well-accepted model to encourage regional economic integration.

Table 10.1 presents selected cross-border connectivity services in operation in the South Asia region. The development of international infrastructure in South Asia

Table 10.1 Cross-border connectivity in operation in South Asia

Sector	Particular
Road transportation (passenger bus services)	Delhi–Lahore, Amritsar–Nankana Sahib, Amritsar–Lahore, Poonch–Rawalakot, Srinagar–Muzaffarabad, Kolkata–Phuentsholing, Agartala–Dhaka, etc.
Rail transportation (passenger train services)	Delhi–Lahore, Kolkata–Dhaka, etc.
Shipping links	Mumbai–Karachi, Colombo–Kolkata, Colombo–Chittagong, etc.
Air links	Delhi–Lahore, Mumbai–Karachi, Dhaka–Karachi, Delhi–Katmandu, Colombo–Mumbai, Colombo–Delhi, etc.
Gas pipeline	TAPI[a], Amritsar–Lahore[a]
Electricity links	Amritsar–Lahore,[a] Bhutan–India

Note: [a]To be operational
Source: Compiled by author

has been so far limited to land and ocean transportation and hydropower. While there has been a relative upsurge in cross-border overland infrastructure services in South Asia, the cross-border infrastructure investment is rather limited to only a few hydropower projects that exist between India and Bhutan. The power trading arrangement between India and Bhutan is one of the oldest cross-border infrastructure investments in Asia, which is an outcome of a successful partnership between the two countries (Box 10.1).

Box 10.1 Example of cross-border co-operation: India–Bhutan power projects

The India–Bhutan partnership in hydropower was effectively started in 1978, when India extended US$200 million for construction of 336 MW hydroelectric plant at Chukha in Bhutan. The Chukha hydroelectric project was entirely funded by the Government of India with a 60:40 ratio of grant and loan. It was successfully commissioned in 1988, and the project was handed over to the Bhutanese government in 1991. About 70 per cent of power generated by this project is exported to India, which helped Bhutan to reduce the trade gap with India.

Table 10.B1 Cross-border infrastructure projects in South Asia

Location	Financial closure (year)	Investment (US$ million)
Chukha (3,336 MW)	1988	200
Kurichhu (60 MW)	2002	119
Tala (1,020 MW)	2003	750

Source: Ministry of Power, Government of India

India has implemented three hydroelectric projects, namely Chukha, Kurichhu and Tala, in Bhutan, of which Tala is the largest one (Table 10.B1). The Tala hydroelectric project is the biggest cross-border power project in South Asia, and also the largest hydro project in Bhutan. This 1,020 MW project is constructed with an investment of around US$750 million, which is entirely funded by the Government of India by way of grants and loans (with a ratio of 60:40). India is also helping Bhutan not only in setting-up the hydroelectric plants but also by providing training and human resource development in the power sector. In 2008, India laid the foundation stone of another 1,095 MW hydropower project at Punatsangchhu. The benefit of cross-border energy trade encouraged Bhutan to seek Indian investments in setting up hydroelectric power plants, which have over 30,000 MW hydroelectric potential.

10.3 Challenges to regional connectivity

The present level of connectivity reflects a restrictive policy regime. South Asia suffers from excessive direct costs and time taken to cross borders and from inefficiency in cross-border transactions, all of which ultimately affect trade negatively. The state of air connectivity among the countries of South Asia is characterised by restrictive aviation policies, resulting in a limited number of economically viable routes. Differences in rail connections, i.e. broad gauge and meter gauge, remain a major stumbling block to realising physical connectivity among SAARC member countries. Trade in the region is constrained by the poor condition of infrastructure, congestion, high costs and lengthy delays. These problems are particularly severe at border crossings many of which pose significant barriers to trade. The rent-seeking informal economy is very deep-rooted and makes trade transactions expensive at the border. Removing such inefficiencies in trade transactions would increase welfare in the region. However, it is worthwhile to note that the gains accruing to some smaller countries in the region are much larger when they occur as a result of the removal of transaction inefficiencies than those resulting from trade liberalisation. Therefore, the results underscore the importance of implementing reforms in border infrastructure and logistics in tandem with other policy reforms, such as transit, to enhance regional integration.

10.3.1 High non-tariff trade costs

Non-tariff trade costs are a significant determinant of a region's competitiveness, wherein an integrated and efficient transport network along with a regional transit mechanism for cross-border movement of goods and services play the pivotal role in integrating a region and would significantly improve the region's trade competitiveness. One of the outcomes of the lack of connectivity in South Asia is higher non-tariff trade costs. In *ad valorem* terms, bilateral non-tariff trade costs between India, Bangladesh, Pakistan and Sri Lanka have been above 90 per cent between 2007 and 2009 (Table 10.2). The cost would be higher if trade in agriculture were considered. The South Asian countries have a higher incidence of indirect cost of trade procedures, currency fluctuation and business (regulatory) environment, compared with tariffs. The variation in *ad valorem* policy-related non-tariff trade costs across countries and commodities presumably lies in obstacles in trade policy, cumbersome trade procedures and infrastructure facilities (UNESCAP 2010).

While countries have succeeded in reducing the number of documents required for export and import, it still takes considerable time for export and import, more particularly in landlocked countries like Afghanistan (Tables 10.3(a) and 10.3(b)). However, the variation in export and import time across South Asian countries is very high.[7] While time for export in Afghanistan takes 74 days, in Sri Lanka it takes only 6 days. Preparation of export documents and inland transport times are the major components of delay in export in the region (Figure 10.1), whereas inland transportation costs make exporting from Afghanistan, Nepal and Bhutan very expensive, and port handling charges in Bangladesh and Maldives are critical to overall export costs (Figure 10.2). In general, import takes more time than export

Table 10.2 Bilateral non-tariff trade costs in manufacturing (%), 2007–09

	IND	BGD	PAK	LKA	THA	CHN	DEU	USA
India (IND)		89 (6)	116 (–24)	76 (9)	90 (–4)	86 (–8)	70 (–17)	74 (–5)
Bangladesh (BGD)	89 (6)		142 (–9)	127 (11)	130 (33)	133 (6)	101 (7)	104 (12)
Pakistan (PAK)	116 (–24)	142 (–9)		127 (14)	118 (–2)	105 (–7)	94 (–15)	94 (–10)
Sri Lanka (LKA)	76 (9)	127 (11)	127 (14)		114 (9)	140 (–1)	98 (2)	103 (23)
Thailand (THA)	90 (–4)	130 (33)	118 (–2)	114 (9)		66 (–14)	79 (–13)	72 (–3)
China (CHN)	86 (–8)	133 (6)	105 (–7)	140 (–1)	66 (–14)		49 (–28)	51 (–15)
Germany (DEU)	70 (–17)	101 (7)	94 (–15)	98 (2)	79 (–13)	49 (–28)		46 (–19)
United States (USA)	74 (–5)	104 (12)	94 (–10)	103 (23)	72 (–3)	51 (–15)	46 (–19)	

Note: Change vis-à-vis 2001–03 in brackets.
Source: UNESCAP Trade Cost Database (version 2)

in the South Asian region. Some of the South Asian countries, such as Bangladesh in number of export documents or India in export time, perform better than China, but South Asian countries cannot compete with China in export or import costs (Figure 10.3). Therefore, the region can achieve substantial productivity gains and cost reductions by reducing policy-related non-tariff trade costs.

10.3.2 Cumbersome cross-border and transit transport facilitation

With the increase in intra-regional trade since the 1990s, countries have opened more border crossings and domestic routes for international transport, and are

Table 10.3(a) Documents, time and cost to export in South Asia, 2012

Country	Documents to export (number)	Time to export (days)	Cost to export (US$ per container)
Afghanistan	10	74	3,545
Bangladesh	6	25	965
Bhutan	8	38	2,230
India	8	16	1,095
Maldives	8	21	1,550
Nepal	9	9	1,960
Pakistan	7	7	660
Sri Lanka	6	6	715
Coefficient of variation (%)	16	82	56

Source: Doing Business Database, World Bank (2012)

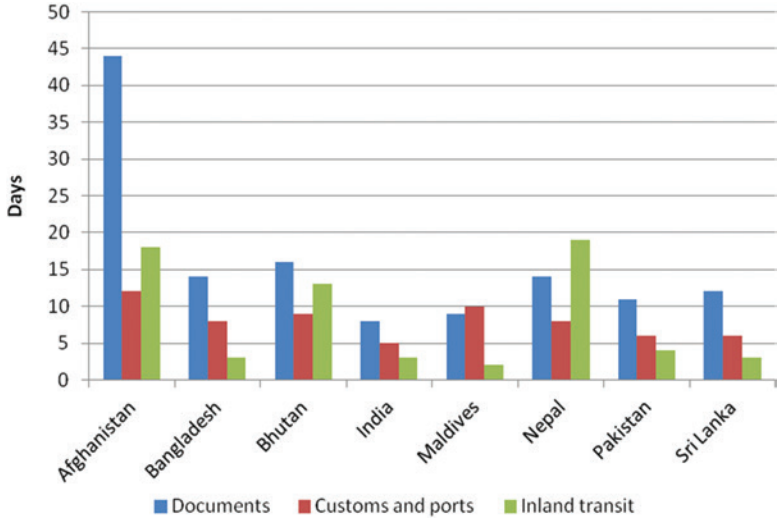
Table 10.3(b) Documents, time and cost to import, 2012

Country	Documents to import (number)	Time to import (days)	Cost to import (US$ per container)
Afghanistan	10	77	3,830
Bangladesh	8	31	1,370
Bhutan	12	38	2,805
India	9	20	1,070
Maldives	9	22	1,526
Nepal	9	35	2,095
Pakistan	8	18	705
Sri Lanka	6	19	745
Coefficient of variation (%)	18	53	54

Source: Doing Business Database, World Bank

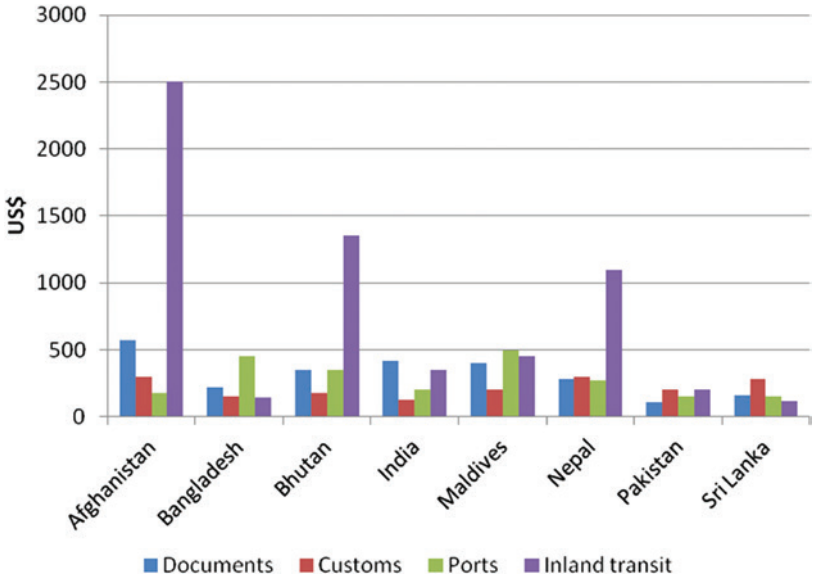
using bilateral and multilateral agreements on transport facilitation to improve the conditions for international land transport. Ambitious initiatives include the customs union among Belarus, Kazakhstan and the Russian Federation, joint customs controls between Georgia and Turkey, and the modernisation of border gates in India, to mention a few. To deal with challenges of co-ordination among different agencies dealing with transport facilitation, many countries have set up national co-ordination mechanisms. India and Pakistan provide transit transport facility to landlocked countries such as Bhutan and Nepal, and Afghanistan, respectively. In many cases, these agreements need revisions in light of new changes in transportation, handling and storage mechanisms and procedures.

Figure 10.1 Time to export (days), 2010



Source: Doing Business Database, World Bank

Figure 10.2 Costs of export (US$ per container), 2010

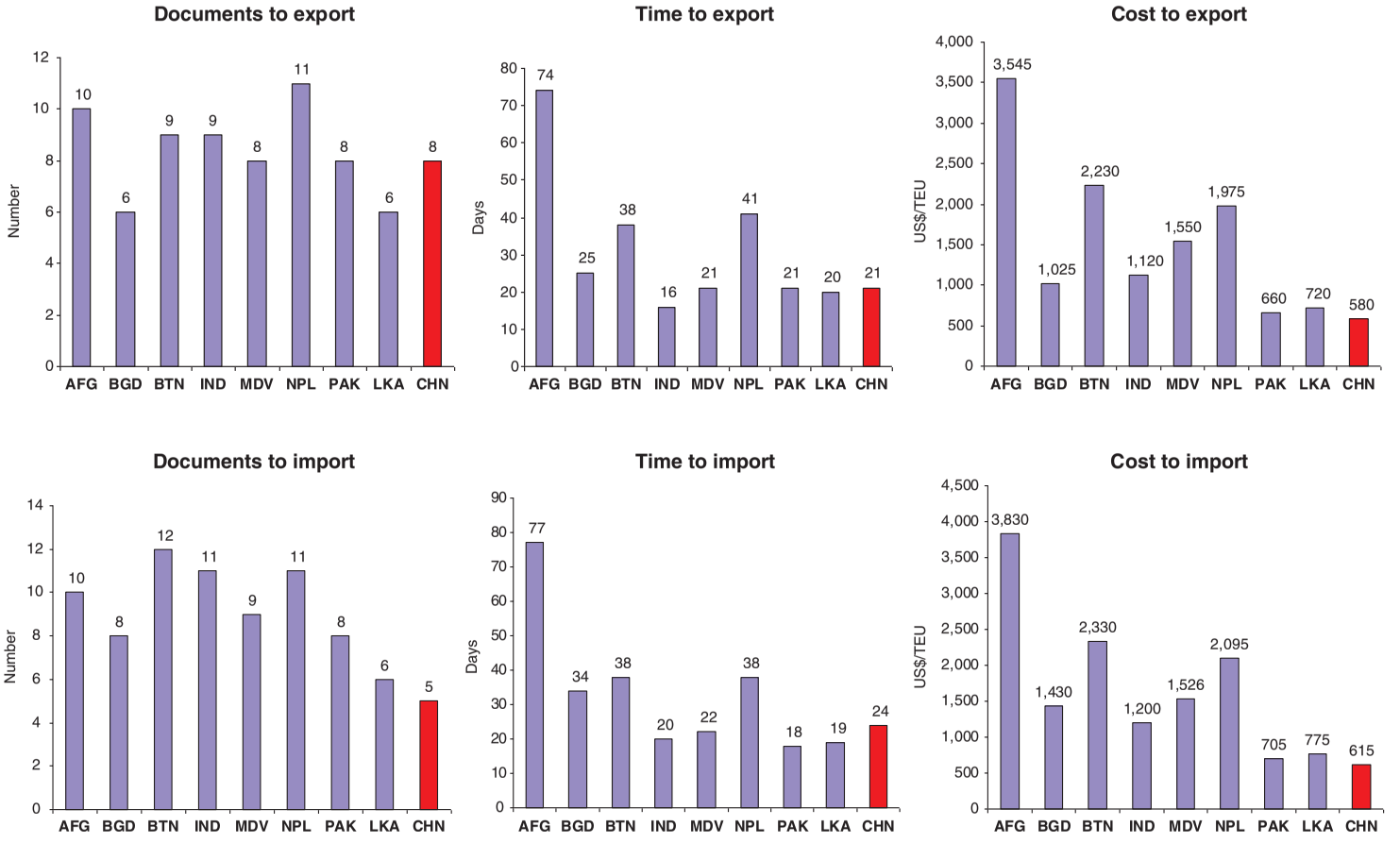


Source: Doing Business Database, World Bank

Nevertheless, cross-border and transit transport are still hampered by many non-physical barriers that lead to excessive delays, high costs and uncertainties. These include multiple technical standards, inconsistent and complex border-crossing procedures and excessive documentation. In addition, goods are often inspected on both sides of the borders by different authorities, and sometimes even while in transit, rather than being inspected either at loading or unloading points. Experience has shown that unilateral measures have had a limited impact on transport facilitation, since gains on one side of the border may be lost on the other – thus, co-operation is essential.

Landlocked countries, which depend on inter-country land transport for much of their external trade, could benefit the most from multilateral facilitation; despite being connected to regional networks, they still depend on transit across neighbouring countries for their goods to reach sea ports and beyond. Many organisations have been bringing stakeholders together to remove these barriers. UNESCAP, for example, through resolution 48/11 adopted in 1992, has been urging member countries to accede to seven international conventions related to land transport facilitation (Table 10.4). To ensure that these efforts converge in the long term, the secretariat has prepared a Regional Strategic Framework for Facilitation of International Road Transport (see Box 10.2). The framework was recently adopted by the Ministerial Conference on Transport held in Bangkok in March 2012. Its adoption by the member states will pave the way for dealing with non-physical barriers comprehensively, which is of critical importance to enhance trade and boost regional integration.

Figure 10.3 Trading across borders in 2013: South Asian countries and China



Note: TEU 20 foot equivalent units
Source: Doing Business Database, World Bank

Table 10.4 Status of accession of UNESCAP regional members in South Asia to the seven international conventions related to land transport facilitation listed in Commission Resolution 48/11, as of 14 February 2012

Country or area	Convention on road traffic (1968)	Convention on toad signs and signals (1968)	Customs convention on international transport of goods under cover of TIR carnets (1975)	Customs convention on the temporary importation of commercial road vehicles (1956)	Customs convention on containers (1972)	International convention on the harmonization of frontier controls of goods (1982)	Convention on the contract for the international carriage of goods by road (CMR) (1956)
Afghanistan			X	X			
Bangladesh							
Bhutan							
India		X					
Maldives							
Nepal							
Pakistan	X	X					
Sri Lanka							

Note: X=acceded before adoption of resolution 48/11.
Source: UNESCAP (2012)

Box 10.2 Regional strategic framework for facilitation of international road transport

The UNESCAP Ministerial Conference on Transport, held in Bangkok in March 2012, adopted the Regional Strategic Framework on Facilitation of International Road Transport. It consists of long-term, common targets as well as desirable strategies for fundamental elements of international road transport and essential facilitation approaches. This could help ensure convergence of efforts by countries to facilitate transport by avoiding inconsistencies and possible conflicts between different facilitation agreements and measures. The framework identifies major challenges to international road transport and provides possible solutions for them. It covers road transport permits and traffic rights, visas for professional drivers and crew, temporary importation of road vehicles, third-party liability insurance, vehicle weights and dimensions, and vehicle registration/inspection certificates. It also includes measures to mitigate transport delay by promoting international conventions, co-ordinating legal instruments, applying new technologies, developing professional training, strengthening national co-ordination mechanisms, and promoting joint border controls and economic zones at borders. One of the important proposals in the framework is the establishment of a regional network of legal and technical experts to help countries upgrade the capabilities of their officials and experts, and provide professional support to the development of transport facilitation agreements, measures and projects.

Source: UNESCAP (2012)

10.3.3 Procedural complexity, multiple handling and inefficient border corridors

The efficiency of border corridors and land customs stations (LCSs) is an important factor for South Asia's competitiveness and its trade prospects. The present trade flow in South Asia is very uneven across the border corridors. Regional connectivity in South Asia would be likely to redistribute regional trade and traffic among the existing corridors. An efficient corridor is, thus, very important in order to maximise the benefits of regional connectivity. Thus, the objectives of the trade and transport facilitation measures in the South Asian region would be to (i) constantly improve the performance of border corridors and LCSs, (ii) eliminate the asymmetry between LCSs pairs, and (iii) remove multiple handling of goods at borders. There is mismatch in the timing of operations of customs and immigration among the LCSs, and the days of operation differ between India and Bangladesh. Apart from immigration, customs and security, which are an essential part of all LCSs, the other facilities in both the physical and non-physical categories vary across the LCSs. For example, except for Birganj in Nepal, none of the major LCSs in South Asia has an exclusive container-handling yard at the border. Similarly, except for Petrapole in India, none has effectively adopted the fast-track cargo clearance system. In the case of

e-governance in customs, most of the LCSs in South Asia now use electronic data exchange platforms. For example, Petrapole and Raxaul use ICEGATE while Benapole and Birganj use ASYCUDA+. The existing electronic data interchange (EDI) system also suffers from certain shortcomings that add to the transaction costs. For example, although the filing of declarations has been made possible online, a hard copy of the declaration is generated by the system – albeit at a later stage – and signed for a variety of legal and other reasons, both for the importer and for customs. Other supporting documents are also submitted for verification by government authorities and their agents. An electronic signature on cross-border movement of goods is not acceptable by customs. A through bill of lading is also not started. Therefore, many shortcomings are associated with documentation, and continue to exist under the present EDI system. Interoperability of electronic interfaces is needed.

Procedural complexities very often work as deterrents to India–Bangladesh trade. The customs offices in South Asia still require excessive documentation, especially for imports, which must be submitted in hard copy form.[8] This often changes the composition and direction of trade in South Asia.

Most of the LCSs suffer from limited warehouse capacity and the lack of banking and foreign exchange facilities. In some cases, banks are located several kilometres from the border (e.g. Burimari, Panitanki and Karkabitta). Adequate foreign exchange facilities are also unavailable at these borders. Some LCSs do not even have a foreign exchange facility, such as Burimari and Banglabandh in Bangladesh, Kakarvitta in Nepal, and Phulbari and Panitanki in India.

None of the LCSs in South Asia has adequate capacity (in terms of either software or hardware) to deal with goods in transit. In most cases, officials were unaware of their country's commitment under General Agreement on Tariffs and Trade (GATT) Article V and the obligations therein. It appears that South Asian countries have promoted bilateral transit agreements/arrangements that are not consistent with all other commitments on trade facilitation and with the objective of reducing trade barriers. Therefore, they need to co-operate and co-ordinate in designing and applying bilateral and regional transit agreements/arrangements. Moreover, South Asian countries did not take full account of international standards and instruments when designing and applying those agreements or arrangements.

The Indian government's Integrated Check Post (ICP) project should help improve its border infrastructure serving South Asian neighbours (Box 10.3). At the same time, we need to upgrade the other side of the border at the same pace. Smaller countries surrounding India may not have adequate funds and capacity to implement ICPs in their part of the border. Helping them financially and technically would be extremely useful in achieving a compatible, harmonised and improved border to serve the trade of the region.

South Asian countries should put the utmost importance on making inefficient border customs stations efficient. If the objective is equitable growth of trade and traffic in South Asia, all the border corridors and LCSs have to improve their efficiency over time. In particular, LCSs in Afghanistan, Bangladesh, Nepal and Bhutan need special

Box 10.3 Integrated Check Posts (ICPs) in India

To undertake measures aimed at simplifying control and accelerating procedures in the border customs points, the Indian government has planned ICPs at identified entry points on land borders. In order to facilitate trade among contiguous countries, each ICP is planned to serve as a single window facility covering customs, immigration and warehousing, health facilities, shopping complex and parking facilities under one roof. The Land Ports Authority of India (LPAI) oversees the construction, management and maintenance of ICPs, which are being developed as publicly funded projects. The LPAI is empowered to notify entry points on land/riverine borders as land ports, to plan, develop, construct and maintain terminal and ancillary buildings, parking areas, laybys, warehouses and cargo complexes, etc., and to establish such facilities as may be required for facilitating trade and traffic. About 13 ICPs, with one on the India–Pakistan border, four on the India–Nepal border, one on the India–Myanmar border and seven on the India–Bangladesh border are being planned. Already the ICP at the India–Pakistan border (at Attari) has been operational since April 2012. The cost of setting up 13 ICPs has been estimated at INR7.34 billion. Of these, four ICPs at Petrapole, Moreh, Raxual and Wagah are proposed to be set up in Phase I at a cost of INR3.42 billion. In Phase II, the balance of nine ICPs at Hili, Chandrabangha (both in West Bengal) Sutarkhandi (Assam), Dawki (Meghalaya), Akaura (Tripura), Kawarpuchiah (Mizoram), Jobgani (Bihar), Sunauli (UP) and Rupaidiha/Nepalganj (UP) will be established at a cost of INR3.94 billion.

Source: LPAI, New Delhi and ECO Secretariat

attention since they lack the facilities offered by developing South Asian countries, thereby showing a tremendous asymmetry and adding to the costs of transaction. A regional approach would be useful particularly for those who lack adequate capacity to upgrade the LCSs. Perhaps, a regional organisation for development of LCSs and corridors in South Asia would pave the way for the transfer of technology in the region. This regional co-operation among the LCSs is essential in order to remove the infrastructural asymmetry between the LCSs. This will also help the exchange of information, training human resources, adapting to new technology, and better utilising the resources in an effective manner. Thus, the requisite policy agenda should help stimulating the evolution of border corridor services, promulgating new performance standards, and encouraging their implementation. At the same time, to improve performance, border corridor management authorities (here, mainly governments) need to constantly evaluate operations or processes related to providing, marketing and selling of services to the users. Nonetheless, the performance of LCSs and border corridors would be contingent upon regional transit in South Asia.

10.3.4 Lack in regional transit

'Freedom of transit' means 'freedom to trade'. Freedom of transit in South Asia is long overdue. Mistrust among South Asian countries along with lack of institutional capacity

Table 10.5 Trade and transit arrangements in Eastern South Asia

Agreement	MFN trade	MFN transit	WTO signatories
India–Bangladesh	Yes	No	Yes
India–Nepal	Yes	Yes	Yes
India–Bhutan	Yes	Yes	India – member; Bhutan – observer
India–Pakistan	Yes[a]	No	Yes
Pakistan–Afghanistan	Yes	Yes	Pakistan – member; Afghanistan – observer
Bangladesh–Nepal	Yes	Yes	Yes
Bangladesh–Bhutan	Yes	Yes	Bangladesh – member; Bhutan – observer
Bhutan–Nepal	Yes	No	Nepal – member; Bhutan – observer

[a] Proposed.
Source: De (2011)

have caused long delays in accepting regional transit, although bilateral transit exists between countries (e.g. India and Bhutan). In spite of WTO membership countries in South Asia do not exchange most favoured nation (MFN) transit (Table 10.5).

Transit is an intrinsic element of any cross-border movement of goods and vehicles, and exercises significant influence on national economies. Among the major causes of high trade transaction costs in South Asia are the cumbersome and complex cross-border trading practices, which also increase the possibility of corruption. Goods carried by road in South Asia are largely subject to transshipment at the borders, which is a serious impediment to regional and multilateral trade. The position is further compounded by a lack of harmonisation of technical standards. The foremost critical factor prohibiting South Asia in achieving its regional connectivity is the absence of regional transit trade. Unlike the European Union, the South and South West Asia regions do not have a regional transit arrangement, although partial transit exists for landlocked countries like Afghanistan, Bhutan and Nepal. Given South Asia's emergence as a free trade area since 2006, following the South Asian Free Trade Area (SAFTA), regional transit will help South Asian countries to achieve the potential benefits of moving into an effective free trade regime. Therefore, transit is one of the central challenges facing the South Asian countries. Economic Cooperation Organization (ECO) member states have adopted a regional transit in 1995, which offers valuable lessons to South Asia (Box 10.4).

The econometric evidence strengthens existing hypotheses of linkages between trade costs, transit and trade flows: the higher the transaction costs between each pair of partners, the less they trade. In a study, it was estimated that a 10 per cent fall in transaction costs at the border in South Asia has the effect of increasing a country's exports by about 3 per cent.[9] In parallel, a regional transit would enhance regional trade, controlling for other variables. At the same time, implementation of e-governance at a border is found to be a significant determinant of trade flows, thus indicating that e-filing of custom formalities has been helping trade to grow in South Asia.

Box 10.4 Economic Cooperation Organization (ECO) Transit Trade Agreement

Considering that improvement of transit trade through ECO is essential, ECO member states signed a Transit Trade Agreement in 1995. The member states have realised that uniform, simplified and harmonised administrative formalities including customs procedures in the field of regional trade, in particular at border crossing points, sea ports and airports, are necessary for achieving the objectives of the Treaty of Izmir. Article 3 of the agreement tells the purpose of the agreement, which is to facilitate trade between two member states when the goods transported have to pass *en route* through other member state/states. Its scope, as noted in Article 4, suggests the transport of goods with or without intermediate re-loading, across one or more borders between a Customs Office of departure of one member state and a Customs Office of destination of another, while passing through the customs jurisdiction of other member state/states. In this agreement, goods transported by means of road vehicles, railway carriages, ships, aircraft or any combination thereof. Goods transported under this agreement are not subject to the payment or deposit of import or export duties and taxes while in transit through the territory of any member state. The Guaranteeing Association undertakes to pay the export or import duties and taxes together with default interest, due under the customs laws and regulations of the country in which an irregularity has been noted in connection with the article. Goods transported under this agreement are not, as a general rule, to be subject to examination through the customs jurisdiction *en route*. In exceptional cases, however, in order to prevent abuse, the customs authorities may examine goods only when irregularities are suspected. In order to avail of the facilities provided under this agreement, goods must be carried either by ships or aircraft or in sealed road vehicles, containers, railway carriages, or a combination thereof, and sealed according to the regulations determined by the Guaranteeing Association. In order to monitor the progress of transit trade under this agreement an ECO Committee on Transit Trade has been constituted having one representative from each signatory member state.

A regional transit will not only bring a steady revenue stream of transit fees but will also help develop industry and service enterprises in the border areas. Once transit between India and Bangladesh is allowed, Bangladesh can earn hefty revenue as transit fees from Indian vehicles travelling to and from India's North Eastern Region (NER) to the rest of India using Bangladeshi soil. The amount may rise if other corridors between India and Bangladesh are also counted. Similarly, a transit arrangement between India, Pakistan and Afghanistan will fetch a hefty royalty to Pakistan for the movement of vehicles between India and Afghanistan using Pakistani soil. There are also huge gains associated with energy conservation due to transit and the efficient use of resources.

The benefits of regional transit favour LDCs in the region, such as Bangladesh. Bangladesh could earn hefty revenues as transit fees from Indian vehicles travelling

to and from India's NER region to the rest of India, using Bangladeshi territory through two corridors. The amount may go up if other corridors between India and Bangladesh are also counted. Similarly, transit arrangements between India, Pakistan, and Afghanistan would provide hefty royalties to Pakistan for the movement of vehicles between India and Afghanistan, using Pakistani territory. Studies indicate that there are also huge gains associated with energy conservation due to transit and efficient use of resources. Due to condition, roads in Bangladesh lack the capacity to carry heavy traffic, particularly the transit traffic which is expected to come from India, Nepal and/or Bhutan. Hence, rail or maritime routes may be promoted where road routes are not supportive to transit traffic.

Therefore, agreeing to a regional transit would mean a 'win–win' gain for all the countries in the South Asian region. The reasons are primarily as follows: first, smaller countries in South Asia (e.g. Afghanistan, Bhutan, Bangladesh and Nepal) are experiencing higher trade with the region. However, lack of transit trade is impeding their intra-regional trade and economic exchange from growing and integrating further. Second, bilateral transit trade (MFN type) does not exist among all the countries in South Asia on a reciprocal basis, mainly as a result of geographical asymmetry and political misunderstanding, among other problems. For example, India and Bangladesh or India and Pakistan do not have transit arrangements even though both the countries are adjacent and share a common border. At the same time, India has a bilateral transit arrangement with Bhutan and Nepal, with which India shares an international border. Third, transit would help smaller countries to earn revenue from transit, which could be utilised for the country's social and infrastructure development and enterprises at border areas. Fourth, South Asian countries have agreed on the regional free trade agreement (FTA) (SAFTA) and they are signatories of GATT. With Pakistan's offer of MFN (also known as NDMA) to India, the greater benefits of SAFTA and multilateral free trade are clearly contingent upon regional transit.[10] However, there are some serious challenges such as the standardisation of laws and regulations relating to transportation, security, maintenance of corridors, etc., which countries have to overcome through continuous dialogue and deeper co-operation.

SAARC has an Inter-Governmental Group (IGG) to advise on facilitation of transport in South Asia. A battery of proceedings of IGG shows that harmonisation of standards and mutual recognition in the transport sector has been the key issue in South Asia. There have been some important developments in regional transportation in South Asia. As per the directives of the Fourteenth SAARC Summit held in New Delhi in April 2007, the ministers of transport of SAARC countries met for the first time in New Delhi on 31 August 2007. Taking note of the recommendations of the SAARC Regional Multimodal Transport Study (SRMTS), SAARC transport ministers agreed to accord a Regional Transport and Transit Agreement, and a Regional Motor Vehicle's Agreement in 2008.[11] Member states have been discussing a Motor Vehicle Agreement (MVA), and a final decision on this is yet to be taken.[12]

The scope and issues of transit have become extremely important since regional trade in South Asia has expanded. South Asian countries have agreed to South Asian

regional transport corridors. However, they have not yet taken a firm decision on regional transport and transit arrangements for the cross-border movement of goods and vehicles. It is apt that they should sign both the MVA and the Regional Transport and Transit Agreement together. A regional transit arrangement will help South Asia to better integrate the region and also to strengthen the globalisation process.

10.4 Vision of an integrated South Asia: The regional co-operation agenda

Progress in transportation links and trade facilitation in Asia so far has been made through several subregional initiatives. Although some subregions have successfully implemented cross-border corridors and progressed much further in strengthening connectivity, such as the GMS, or have introduced regional transit arrangements, such as ECO, few others (such as the SAARC) have made any major breakthroughs. The subregional transport corridors, such as the GMS transport, and trade facilitation programmes have created a demonstrable effect in Asia and have become a role model for other subregions in Asia (such as the Central Asia Regional Economic Cooperation (CAREC) programme). The improvement of the subregional transport corridors in the GMS has resulted in significant savings in vehicle operating costs and reduced travel times. Although several benefits are apparent from completed subregional projects, three main issues hamper the full delivery of these benefits: first, the subregional transport corridors ('hardware') in Asia are not always supported by trade facilitation ('software'), except perhaps in the GMS; second, missing infrastructure links in many subregions have reduced the effectiveness of the completed projects; and third, lack of synergy between national and subregional transport corridors is very common. As a result of the road improvement, national traffic has increased across the corridors, indicating that national-level benefits have been high. It is apparent that international traffic has been slow to grow, partly as a result of the absence of an agreement to facilitate the cross-border movement of vehicles and absence of strong and stable pan-Asian transport networks. The pan-Asian transport corridors as well as country strategies continue to depend on national institutions for planning and national funds for implementing the projects. The overall attitude toward AH and TAR projects apparently favours addressing national constraints rather than developing regional arrangements.

Unlocking the region's trade potential is a daunting task. Costs for not having uninterrupted road or railway connectivity across the region or facilitation of border trade can offset gains appearing from trade preferences as proposed under several FTAs and other arrangements such as SAFTA. Therefore, the need for a better enabling environment for trade that offers lower trade costs has gained momentum throughout Asia. However, a favourable regional climate to create a seamless infrastructure that can operate to its full potential is missing in South and South West Asia. Because of this, the agenda of the regional co-operation has to go beyond 'tariff-based policy' barriers and include 'non-tariff policy' barriers like regional connectivity in both its hardware (transport corridors) and software (facilitation of movements of goods and vehicles across borders). A scrutiny of

subregional programmes across the world clearly shows that most of them have now undertaken exclusive projects to improve subregional connectivity.[13] To realise the potential of these subregional networks, it may be necessary to integrate them with the pan-Asian arteries such as the AH and TAR, or those initiated by development organisations like the World Bank and the ADB. Therefore, in order to promote seamless connectivity in South Asia, the primary challenging task is two-fold: first, to integrate the different subregional transport corridors and modes (railways, roads, air and maritime shipping), which will facilitate the movement of goods and services in South Asia and beyond; second, to overcome institutional constraints and bottlenecks that are deteriorating regional competitiveness by making trade expensive; and third, following ASEAN, the South Asia region should have a list of priority projects in connectivity (Box 10.5).

With SAFTA and the SAARC Agreement on Trade in Services (SATIS), the next stage would then be to achieve customs union and economic union in coming years. To unleash the trade potentials of these countries and to realise the benefits of regional connectivity, the prime objective of South Asian regional co-operation should be to improve national and international infrastructure. Perhaps more focus should be given to international infrastructure that enhances regional connectivity. The objective of regional co-operation in the present context would be to achieve an integrated Asia. There is high potential for co-operation in connectivity and trade facilitation areas in South Asia, and a blueprint is given in the next section.

10.4.1 Multimodal transportation and opening of regional transit

South Asian countries are now looking towards closer economic integration in the region. Recognising its importance, several SAARC Summits decided to strengthen transport, transit and communication links across the region. An integrated overland connectivity would provide substantial benefits to small landlocked countries such as Bhutan and Nepal by giving access to the South Asian market at lower costs. An integrated transportation network would yield much larger economic benefits whilst minimising risk. Integration of the transport networks of South Asia is especially crucial to landlocked countries, such as Afghanistan, Nepal and Bhutan, and landlocked areas within countries, such as India's North Eastern Region or Pakistan's North Western Region, as this could serve to end their landlocked or semi-isolated status and provide shorter transport and transit links. However, there is an urgent need of prioritisation of SAARC corridor projects in South Asia and to enhance regional integration through regional transit in a time-bound manner. In general, the task ahead is to revive, renovate and re-establish the region's transportation linkages, which have played a pivotal role in integrating the region, and establish new cross-border infrastructure in order to reduce the trade transportation costs across borders.

We also should encourage inter-modal links of both maritime and land routes. The maritime route would be from Jawaharlal Nehru port to Bandar Abbas port in Iran, whereas the land route will follow the Asian Highway 1 from the Iranian port Bandar Abbas. Another option is to use Chabhar port in Iran, to access Afghanistan and Central Asia.

Box 10.5 Master plan of ASEAN connectivity: List of priority projects

The master plan also identified prioritised projects from the list of key actions stipulated under the various strategies mentioned above, especially those whose implementation will have a high and immediate impact on ASEAN connectivity. These include:

(i) completion of the ASEAN Highway Network (AHN) missing links and upgrade of Transit Transport Routes (TTRs);

(ii) completion of the Singapore Kunming Rail Link (SKRL) missing links;

(iii) establishment of an ASEAN Broadband Corridor (ABC);

(iv) Melaka–Pekan Baru Interconnection (IMT–GT: Indonesia);

(v) West Kalimantan–Sarawak Interconnection (BIMP–EAGA: Indonesia);

(vi) study of the roll-on/roll-off (RORO) network and short-sea shipping;

(vii) development and operationalisation of MRAs for prioritised and selected industries;

(viii) establishment of common rules for standards and conformity assessment procedures;

(ix) operationalisation of all National Single Windows (NSWs) by 2012;

(x) discussion of options for a framework/modality towards the phased reduction and elimination of scheduled investment restrictions/ impediments;

(xi) operationalisation of the ASEAN agreements on transport facilitation;

(xii) easing visa requirements for ASEAN nationals;

(xiii) development of ASEAN Virtual Learning Resources Centres (AVLRC);

(xii) development of ICT skill standards;

(xv) ASEAN community building programme.

Source: ASEAN Secretariat (2010)

The initiatives for building the supply capabilities and trade liberalisation in the South Asian region need to be complemented by a new approach towards connectivity and transit facilities for interconnecting the sub-continent that existed in the past. India is the only country in the region which shares land borders with its neighbouring countries, namely Afghanistan, Bangladesh, Pakistan, Nepal and Bhutan, and sea routes with Sri Lanka, Maldives, Pakistan and Bangladesh. Road and rail links between the regional countries have to pass through the Indian territory. Multimodal transportation, thus, would be useful to landlocked countries like Nepal and Bhutan

or smaller island countries like Maldives to access third country markets using South Asian soil.

One of the most crucial non-physical barriers appeared to be the lack of a bilateral transport agreement to facilitate uninterrupted movement of goods and vehicles across the borders in South Asia. As a result, goods are required to be transshipped at the border between the trucks of neighbouring countries. South Asian countries have to eliminate some important non-physical barriers such as lack of parking, immigration and customs offices, baggage scanning equipment, telephone and warehousing at border posts, as well as EDI/IT and standardisation of working hours and weekly holidays, as well as use of complicated customs procedures and lack of transparency in inspection. To allow movement of vehicles, goods and passengers across the region on a door-to-door basis, South Asian countries should adopt the Regional Transport and Transit Agreement. The Agreement will be the stepping stone to reducing delays and costs at the borders and also to create a transportation 'hub' for each other.

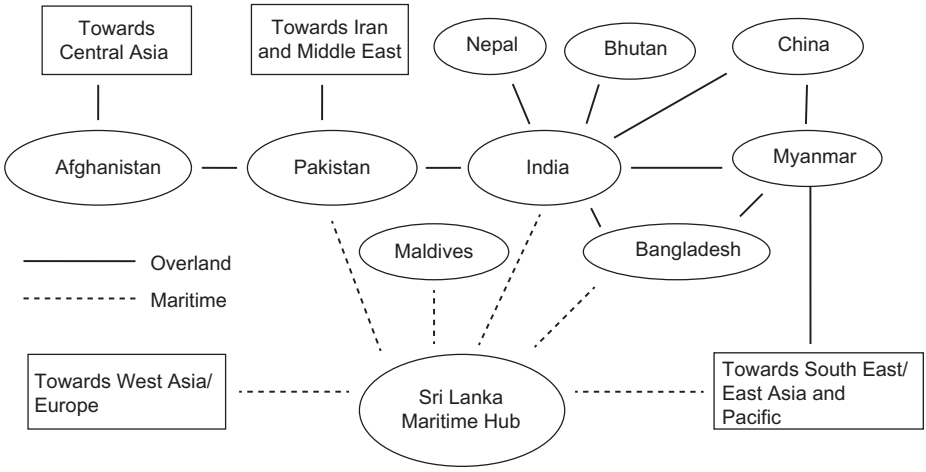
For bigger countries like India and Pakistan, the economic benefits from trade agreements would be modest since their trade with South Asian neighbours is small in relation to their overall trade. If services and investments are included, the gains of bigger countries like India and Pakistan would stem from expanded exports, appearing from an integrated transport network. However, the gains of larger economies in South Asia from expanded trade in the region would be limited if they do not attempt, in a greater way, to rebuild the region's transportation infrastructure and associated software at the borders. Bigger countries would stand to benefit more from the continuation of their policies of unilateral liberalisation, setting in place improved infrastructure at the borders, extending support to capacity building in smaller South Asian countries, among others.

10.4.2 APIBM corridor: Asia's southern silk route

An integrated South Asia could be achieved only by setting in place an integrated overland connectivity and associated soft infrastructure at borders. We need to approach all the pending proposals for transit across the sub-continent with an open and positive mind.

Integration of the transport network of South Asia is especially crucial to landlocked countries such as Nepal and Bhutan and regions such as the NER of India, as this could serve to end their landlocked or semi-isolated status and provide shorter transport and transit links. A regional overland road link from Islamabad to Dhaka via Delhi can be revived for regional trade with some effort. A major part of this corridor is domestically operational, dual carriageway, and an integral part of the old Sher Shah Road, or Grand Truck (GT) Road. The opening of the route will mark a revival of the old linkages in South Asia dating back to the British Period. Therefore, the APIBM corridor represents an Afghanistan-Pakistan-India-Bangladesh–Myanmar Transport Corridor, which is meant for making each and every country in South Asia a transport hub for trade in the broader region, and deserves a high priority for operationalisation (Figure 10.4).

Figure 10.4 Potential transport hubs in South Asia



Source: Drawn by author

The importance of the APIBM corridor is not only for trade but it would also facilitate investments in the infrastructure sector in South Asia. It will also bring many rich rewards for bordering regions. It can make Pakistan and Afghanistan hubs for India's trade with Iran, the Middle East and Central Asia although that would need an upgrading of infrastructure and LCSs at Afghanistan's border with the Central Asian countries (Turkmenistan, Uzbekistan and Tajikistan). Similarly, Bangladesh will become a hub for India's trade with Myanmar and other South East Asian countries, besides serving as a transit for India's NER. Myanmar itself will become a transit hub for India's trade with other ASEAN countries (see Figure 10.4). Sri Lanka is already well placed to be a maritime hub in South Asia with a lot of India's trade transshipped through the port of Colombo. Apart from transit revenues, there are huge gains associated with energy conservation due to transit and the efficient use of resources. This APIBM corridor would be Asia's new silk route, linking Central and West Asia with East Asia, where South Asia is the land bridge and would be a most vital corridor for expanded trade and transportation.

10.4.3 Building a South Asian railway network

India has the best railway system, among developing countries, in the world. Railways played an important role in integrating the Indian sub-continent during the pre-independence period. Railway is the only mode of transport which can play a positive role in integrating the South Asian region by allowing cross-border movement of bulk goods. However, compared with highways, the connectivity of the South Asian railway network might require greater effort in view of gauge mismatch and multiple missing links between the countries. For example, India and Pakistan have broad gauge, all-weather railway networks, whereas the Bangladeshi railway system is based mostly on meter gauge. However, with a definitive

objective, there should be continuous effort in establishing an uninterrupted and harmonised railway network in South Asia. India's vast experience in managing a modern railway system would be very useful in re-establishing South Asia's railway link from Kabul to Dhaka. For example, India has been playing an active role in linking Bhutan with India's railway network, and also helping Nepal in extending the railway line from Birganj to inside the country. The restoration of an India–Bangladesh railway link is most important. India and Bangladesh again resumed the passenger train service between Kolkata (India) and Dhaka (Bangladesh) on 14 April 2008. This is a welcome step towards fostering closer communication linkages between the two countries which would facilitate the movement of goods and people.

Another major barrier to intra-regional movement by railway is the lack of standardisation of technologies, operation and maintenance practices including different types of gauges, braking systems, incompatibility of rolling stock, etc. South Asian countries have to eliminate some of the other major physical barriers such as inadequate loop lengths, some missing links of shorter lengths in the border areas, lack of physical infrastructure at interchange points, load restrictions on bridges, lack of co-ordination for gauge conversion programmes on different railway systems and capacity constraints in certain sections of the identified corridors. Islamabad and Istanbul already have a container train between them which also touches Tehran. If we manage the railway gauge, a direct container train can easily be operated between Islamabad and Dhaka touching Lahore, Delhi and Kolkata. Ultimately, this will link Dhaka with Istanbul. A multilateral rail transport agreement would pave the way to the faster movement of bulk transporting goods and services.

Besides standardisation of the railway tracks, the major challenges for ensuring smoother connectivity on the eastern side are as follows: (a) to link India's Manipur with India's main railway corridor, and (b) to re-establish and renovate railway networks in Afghanistan, Pakistan and Bangladesh. Indian Railways is actively engaged in the harmonisation and construction of railway tracks in the NER of India. The Jiribam–Imphal rail link may be extended to Mandalay as part of the Delhi–Hanoi railway project. Without having a compatible and strong railway system inside Myanmar and Bangladesh, closer communication between India and her immediate eastern neighbours will not be possible. Similarly, the railway infrastructure in Afghanistan and Pakistan will have to be developed. India may extend its expertise to other South Asian countries for railway infrastructure development.

10.4.4 Strengthening inland waterways, ports and shipping, and aviation

In the case of inland waterways, there is formal understanding between India and Bangladesh, which is renewed on a monthly basis. It serves the interest of only Bangladesh and India, where levels of traffic in both intra-country and transit transport had been reducing over years, although during certain periods bilateral traffic has been substantial. It was, however, recognised that inland waterways transport has great potential to provide a cost-effective transport service between

India and Bangladesh. Therefore, the two countries should accord the Inland Water Transport (IWT) Agreement for the longer term, and similar understanding should also be encouraged between India and Nepal, and India and Pakistan.

With regard to maritime transport, the major barriers include likely capacity constraints at many of the maritime gateways, together with heavy siltation at navigation channels where depths fluctuate with tide, inadequate and poor maintenance of channel markings, old technology in cargo and ship handling equipment, as well as floating crafts. Some other barriers impacting port performance include lack of professional management and computerisation, as well as EDI/IT to link up stakeholders. Customs procedures are found to be too complicated, while cumbersome port documentation is still in use and labour unrest was also noted in some maritime gateways.

Transshipment between India and Pakistan is a long-standing unresolved bilateral issue. In the absence of direct calls between Indian and Pakistani vessels, maritime trade between India and Pakistan is routed through a third country. The India–Pakistan Shipping Protocol, signed in 1975 as per the Simla Agreement of 1972, restricts transshipment cargo destined for a third country carried by the vessels of either country. As a result, capacity utilisation for a service run either by an Indian or a Pakistani flag vessel is badly impacted, as an Indian vessel cannot pick up cargo for a third country from Pakistan and similarly a Pakistani vessel cannot carry cargo from Indian ports to a third country. Interestingly, a flag other than India and Pakistan stands to benefit, as it falls outside the purview of the protocol. In order to boost up bilateral trade, the governments of India and Pakistan should amend this Protocol.

Supply-side constraints are posing a serious threat to maritime transportation infrastructure. Except India, the remaining South Asian countries do not have an adequate fleet of vessels or workforce. In view of rising merchandise trade, South Asian countries have to strengthen their maritime profile for self-reliance on national carriers. India can play a major role in strengthening ports and the shipping sector, particularly, Bangladesh, Maldives, and also Myanmar, in terms of training human resources in marine engineering and nautical science, and costal management, among others. India has established the National Maritime University in Chennai, which can be made operational for all South Asian countries.

South Asia has a long coastline which offers good potential for short sea or coastal shipping. Maritime costs are a significant determinant of trade flow across the region. On the one hand, goods and passenger traffic in South Asia have been growing, and on the other, ocean freight is rising day by day. Instead of relying on foreign vessels, short sea/costal shipping in this region will help the LDCs and small island countries in South Asia to effectively gain from rising trade and transportation. Added to this, complementary policy reform, accompanied by improved procedural and operational efficiency, in the shipping sector is essential to support regional maritime connectivity. To start with, a regional agreement to allow short sea shipping in South Asia will not only enhance ferry services across the region but also strengthen the maritime profile of the countries.

With regard to aviation, South Asian airports suffer from tremendous capacity constraints, on-shore and off-shore, for both passengers and cargo, in terms of runways, parking areas for aircrafts, passenger handling areas, cargo processing facilities (green channel, cold storage, etc.), as well as security and baggage handling facilities. There is urgent need for pilots and ground handling staff in airports. It would be useful if South Asian countries jointly set up a regional aviation training institute in the region. In addition, an Open Sky Policy for airlines and freight originating from within the region may help in strengthening the connectivity between important cities.

For advancing regional and global aviation connectivity, we need stronger regional co-operation in South Asia. To start with, this co-operation may consider some important areas such as aviation safety, for instance co-operative development of operational safety and airworthiness, development of infrastructure, standards, co-operation among air traffic controls, etc. The South Asian region may look at the ASEAN template of regional aviation co-operation. ASEAN countries adopted the ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services on 20 May 2009. This Agreement is one of the components of the Roadmap for Integration of Air Travel Sector and the Action Plan for ASEAN Air Transport Integration and Liberalisation 2005–15, adopted at the Tenth Transport Ministers Meeting in Phnom Penh in 2004.

10.4.5 Harmonising rules, regulations, and standards

In order for the infrastructure hardware of a South Asia-wide transport network to function effectively, necessary soft infrastructure, such as relevant rules, regulations, and standards, needs to be in place. Rules, regulations, and standards must meet at least a common regional structure, but preferably an international design. Participating countries need to formulate and agree on a harmonised set of rules, regulations, and standards.

Trade facilitation initiatives in the area of standards and conformance – through reduction of technical barriers to trade (TBT) – focus on addressing differences between national laws, standards and conformity assessment procedures, towards a broader horizontal approach at the regional level. We therefore need to harmonise national standards with international standards and develop MRAs among member countries in South Asia.

There is a need for higher-level co-ordination among many concerned stakeholders and agencies, such as transport, customs, immigration and quarantine authorities. At the same time, the capacity of concerned national institutions, particularly for least developed countries, needs to be enhanced for effective implementation of these agreements. There is also a need for a uniform or compatible standard (preferably an international standard) for development of cross-border transport networks to make the networks effective and beneficial for all stakeholders. Establishment of an efficient management system and associated capacity building to look after the harmonisation of standards relating to cross-border transportation would pave the way to achieving regional connectivity. This would ultimately help achieve single-stop and single-window customs across the region.[14]

10.4.6 Financing cross-border transport projects

Connecting South Asia requires a large investment. It will be a difficult challenge to mobilise such a large investment, particularly because of the ongoing financial and economic crisis. This calls for an appropriate financing mechanism to mobilise the region's huge savings for infrastructure development. This financing scheme should aim to raise resources from the public sector, multilateral development banks and the private sector on a public–private partnership model. Bigger economies such as Japan, Korea, China and India have leading roles in filling the financing gap. They should unilaterally come forward to fill resources gaps in the South Asian corridors, particularly in terms of financing and managing missing links and bridges.

10.4.7 Strengthening co-ordination among countries and stakeholders

Weak co-ordination, like high tariffs, prohibits trade among countries. The poor co-ordination between planning, implementing, and financing agencies causes high-level inefficiency in infrastructure development. Co-ordination among various concerned agencies or institutions within a country is also required because each may have different objectives. In order to have timely implementation of vast South Asian corridors, effective co-ordination between countries and other stakeholders is vital. Without such co-ordination, it is unlikely that an optimal cross-border infrastructure will come into existence. Thus, an effective co-ordinating institution will be necessary to generate willingness from countries to participate in the projects. It can also resolve conflicting interests, if any arise, between the governments and stakeholders.

10.4.8 Projects to strengthen regional integration

Some key projects that would pave the way for achieving the target of a customs union and economic union are as follows:

- strengthen cross-border infrastructure (move from road corridors to economic corridors);
- open South Asian regional transit;
- secure technology for managing regional infrastructure corridors and security;
- facilitate investment in regional infrastructure;
- promote multimodal transportation (rail transit, regular container trains in the region);
- improve the efficiency of border corridors (both sides of border, with improvements in ICP project in parallel);
- strengthen and harmonise rules, regulations and standards relating to transportation and customs;
- set up South Asian Single Window (customs);
- simplify and harmonise trade procedures, most particularly at the border;

- strengthen co-ordination among countries and stakeholders; and
- streamline NTMs.

10.5 Conclusions

South Asia's economic performance during the 2000s has been commendable. Undoubtedly, South Asia is a major economic force in the world. However, the quality and capacity of South Asia's infrastructure, both on the national and cross-border levels, is certainly a matter for concern. The lack of regional connectivity is one of the major constraints hindering the potential of regional growth and economic integration. The experiences of Europe, Latin America and other parts of Asia (such as GMS), where the presence of cross-border infrastructure is comparatively high, and, to a lesser extent, Africa, where the development of cross-border infrastructure has taken a new shape, suggest that regional co-operation promotes greater prosperity and stability for participating countries. A major success factor is their ability to build regional initiatives that are based on shared strategic vision, as captured in the Initiative for the Integration of Regional Infrastructure in South America (IIRSA). South Asian co-operation programmes have to be much stronger to address the regional infrastructure needs and to enable institutions and policies to be established. Therefore, what is important for South Asian countries is to enhance the facilitation of trade and transport across borders. Integrated regional connectivity would provide substantial benefits to landlocked and small island countries as well as poor, smaller countries by giving them access to world markets at lower costs.

To realise the benefits of regional connectivity and trade liberalisation, South Asian countries have to follow policies that help them to reduce the costs of trade at border, on the one hand, and that absorb new transportation technologies, improve productivity and increase their labour force's knowledge and skills, on the other. Since countries in South Asia do not start with the same endowments, there will be both winners and losers. Countries that do not have adequate capacity to engage with the integration process may lose out, while those endowed with higher infrastructure stocks will win. The shared objective of the regional co-operation should then be to eliminate this asymmetry between countries in South Asia and help the countries lagging behind to move ahead through a deeper co-operation.

In order to encourage integration in South Asia, a comprehensive approach is needed to address the physical infrastructure issues, including roads, rail, inland waterways, maritime transport, dry ports, airports, sea ports, and information and communication technology, as well as the non-physical soft infrastructure issues, including cross-border transit facilitation measures, customs clearance, and other facilitating policies and regulations. Addressing these issues, requires collaborative efforts among South Asian countries, multilateral development banks, the United Nations agencies, intergovernmental organisations, bilateral donor agencies, the private sector and professional associations. In particular, high-level policy direction and commitments are important for providing mutually beneficial regional connectivity in the region and beyond. In this regard, a commonly agreed strategic regional connectivity plan

like the one ASEAN has recently developed (master plan of ASEAN connectivity) is needed to facilitate closer co-operation and achieve an integrated South Asia.

There are many possible areas of co-operation in South Asia for raising low regional trade to a higher level. Undoubtedly, improved physical connectivity and regional transit, increased FDI and the energy trade are important factors in unlocking regional trade potential. Moreover, greater engagement in these areas would generate employment opportunities and other economic and social activities, which in turn would help reduce poverty (particularly in the bordering areas), enhance foreign direct investment flows, and generate new business opportunities for the private sector. At the same time, a regional transit arrangement would help South Asia to better integrate the region and also to strengthen the globalisation process. Use of improved technology to manage transportation and security would help reduce trade costs through higher efficiency and take care of additional traffic. Stronger regional co-operation with other regions and countries is thus essential in order to secure the technology to manage the transportation corridors, trade and security.

Notes

1 See, for example, De (2009, 2011).
2 See Duval and Uthoktham (2011).
3 Sourced from World Development Indicators (WDI) Online Database, World Bank.
4 Cited in UNESCAP (2012).
5 See International Civil Aviation Organization (ICAO) Data, available at: www.icaodata.com.
6 See SAARC Secretariat Press Release dated 30 August 2011.
7 The coefficient of variation is 82 per cent in the case of export time.
8 Improvements in customs procedures have definitely reduced the amount of informal payments needed for clearing cargo. Even so, under-the-table transactions to clear exports at the borders remain high. The actual amount is negotiated between the shipper and the customs agent, with both agreeing on the amount per shipment that will be reimbursed without an invoice and which will therefore be available for paying customs officials to expedite cargo clearance.
9 See De (2011).
10 See De et al. (2012).
11 See SAARC Secretariat Newsletter, January 2008.
12 See the Press Release titled 'India's Chairmanship of SAARC', issued by the SAARC Division, Ministry of External Affairs, Government of India, dated 22 April, 2008, New Delhi.
13 See, for example, ADB–ADBI (2009); UNESCAP (2012).
14 In this context, the ASEAN Single Window (ASW) may be mentioned which is designed to expedite customs clearance and release shipments coming to and departing from ASEAN. This is broadly defined as an environment where a single window in each country in ASEAN (i.e. NSW) operates and integrates. The NSW is a prerequisite of the ASEAN Single Window. Six ASEAN countries are now implementing ASEAN Single Window.

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