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Setting a Dynamic Process in Motion

Recent trends in globalization that enable the decentralization of production and distribution activities worldwide offer tremendous economic opportunities of employment and growth to poor countries. One-third of world trade in the mid 1990s occurred within such global production networks (World Bank 1999).¹ The ability of countries to grow rapidly depends on their capacity to link with global and regional markets. In turn, this capacity depends significantly on connectivity, and on the efficiency and speed with which goods and services can be moved from production centers to final markets.

One of the underlying objectives of this study was to develop ways to improve access to the landlocked areas of South Asia, specifically Nepal, Bhutan, and Northeast India. This objective is closely linked to opening up a region to new economic opportunity because of geographic interdependencies. For this reason, the study took a regional approach and focused on multicountry routes serving these areas. The conclusions for improving the trade logistics among these countries and with the outside world can also be applied to internal trade between the rural areas and the urban markets. The approach was to gather information from private sector logistics providers and shippers concerning the current situation on selected routes. The conclusions presented in this chapter for improving logistics will provide direct savings to the shippers, logistics providers, and consignees.

There are two fundamental questions. First, to what extent do the economies of the transit countries benefit from these improvements? Second, to what extent do these improvements benefit the poorer members of society? There are, of course, simple answers to these two questions. First, the country providing the transport infrastructure can recover its investment through appropriate charges to the transit vehicles and cargo while deriving additional value from complementary services provided to these transport activities. The value added is greatest where the transit country provides an efficient international

1. *World Development Report 1999*, The World Bank.

seaport gateway and some of the trucking or rail services used in the logistics chain. Second, the poorer sections of the society will derive direct benefits because of better access to urban and foreign markets for local products as well as increased employment associated with upgrading the transport infrastructure. The indirect benefits are the continuity of employment in industries, which, without better logistics, would lose market share. The more complex answers about the extent and allocation of benefits are dependent on the following issues:

- How well the isolated or landlocked regions are served,
- The structure of the charges (in terms of who pays and who benefits), and
- The efficiency of the logistic systems that will help minimize cost to the economy.

This chapter discusses the role of the Bank in helping to shape the outcome.

The previous sections made the following recommendations regarding transport and logistics in the subregion:

- **Protocols.** Establish or amend bilateral transit protocols to allow for the movement of transit cargo across borders under bond without transshipment or inspection.
- **Procedures.** Simplify and standardize the documents and clearance procedures required for cargo crossing land borders or exported or imported through the seaports.
- **Productivity.** Improve the productivity of the seaports and the railway services to eliminate unnecessary delays. These measures can dramatically reduce the time that cargo spends in ports or on railways.

- **Privatization.** Expedite the transfer of responsibility for transport operations and services (but not necessarily infrastructure) from the public to the private sector.

- **Providers.** Reduce the level of regulation of the providers of third-party logistics in a way that will both encourage competition and allow for vertical integration of such services as transport, storage, consolidation, documentation, and clearance. Modern regulations should be introduced to govern the liabilities associated with the carriage of cargo by different modes.

- **Perishability.** Improve the quality of logistics by placing an emphasis on reducing delivery time, increasing reliability of delivery, and minimizing losses en route to enable local manufacturers to compete for the supply of perishable products.

- **Packaging.** Increase the use of containers for shipment of goods by developing ICDs that allow cargo to be stuffed and destuffed closer to the point of origin or the point of destination.

- **Flexibility.** Allow flexible routing for vehicles carrying transit cargo or imports through defined border crossings.

- **Cyber trade.** Introduce electronic data interchange and business-to-business e-commerce to reduce logistics costs and time and overall transaction costs.

The changes that offer the largest benefits in terms of improved logistics are the revision of the current bilateral transit protocols, flexibility in transit cargo routing, and the increase in productivity at the seaports. Those offering significant benefits for both transit traffic and domestic traffic are improvements in the productivity of

the railways and privatization of the transport services. The improvements in packaging, deregulation of logistics providers, and expansion of cyber trade offer the best long-term opportunities for reducing transaction costs and providing the quality of logistics required for high-value cargoes.

Improvements in transport logistics have important implications for poverty alleviation in one of the poorest regions of the world. This is possible through opening up the region and by offering new opportunities through better market linkages, easier and cheaper development of the resource base, and reduced losses that result from inefficient storage and multiple handling. The role of transportation in economic development includes everything from limited-access national highways to local feeder roads in rural areas, regional container transshipment terminals to barge terminals, and block trains to scheduled freight rail services. The same applies to logistics, which covers the complete movement from origin to destination. Improved logistics are especially important for small and medium industries in rural areas that must deliver a quality product within an acceptable time and at a competitive cost. Presented below are some examples in which the countries and states in the subregion are beginning to seek and find benefits of improved transport logistics.

Bhutan has recently explored the possibility of exporting fruits and vegetables and associated processed products. Although the industry has had some difficulties providing products of sufficient quality to sell in the neighboring countries, the major impediment has been poor inefficient transport links. Current border-crossing procedures create delays and add costs because of informal payments and damage to the perishable cargo. The future development of this trade will depend on better marketing and improved logistics.

The development of improved logistics within the region will encourage the growth in international and intraregional trade, as well as domestic trade between rural and urban areas. An example of the latter is the marketing of pumpkins produced along the river in the Bogra area. The pumpkins were formerly produced by poor people on public land and traded in the local market. Recent improvements in transportation that came about because of the construction of the Jamuna Bridge are now allowing the growers to sell their produce in urban markets.

The recently established Numaligarh refinery in Assam is examining ways to supply petroleum products to the Baghabari region in Bangladesh by transporting them to West Bengal via Bangladesh by inland waterways. The Indian refineries are located close to the Bramhaputra river (designated as the No. 2 National Waterway in India). The Inland Water Transit and Trade protocol between India and Bangladesh, revised in October 1999, facilitates easier and more rational barge movements between the two countries. Baghabari would be the port of call for Indian vessels for unloading petroleum products because large storage facilities and barge unloading facilities already exist.

STRATEGIC LINKAGES AND AREAS FOR DEVELOPMENT

The previous chapters examined various routes requiring additional development. Other routes were selected based on the findings of background studies conducted under the Regional Initiative and other projects (such as the Nepal Multimodal Trade and Transit Facilitation Project and the Export Diversification Project) and observations of the private sector. From these, a core set of strategic linkages or routes have been identified that would create opportunities for increased economic growth and trade in the subregion. These would include:

The key routes linking landlocked Nepal and Bhutan to regional and international markets include:

- Kathmandu-Birgunj-Calcutta
- Kathmandu-Bhairahwa-Nhava Sheva
- Kakarbhitta-Phulbari-Banglbandh-Dhaka
- Thimphu-Phuntsoling-Siliguri-Calcutta
- Thimphu-Phuntsoling-Burimari-Dhaka

The key routes linking the Northeast states of India to regional and international markets would include:

- Calcutta-Benapole-Akhaura-Agartala (road and rail)
- Calcutta-Gede-Darsena-Jamuna Bridge-Akhaura-Agartala
- Agartala-Akhaura-Chittagong

The routes linking the landlocked countries are currently used but are inefficient due to problems at the border crossings and seaports. The exception is one of the more efficient ports at Nhava Sheva. These routes require improvements in both roads and port operations. They would also benefit from changes in customs procedures and revisions of the bilateral transit protocols. The routes to Northeast India are not currently used because they lack critical links and are not designated as transit routes in the bilateral agreements. These will require a combination of investment and revision of the agreements.

The most immediate problem affecting the efficiency of shipments of imports, exports, and transit cargoes is the productivity of the ports. Cumbersome operating procedures, restrictive work rules, old and unreliable equipment, and a

lack of commercial management produce long, unnecessary, and unpredictable delays. In addition, they add to the informal payments and the loss of cargo. These not only account for a significant portion of the time and cost for land transport, but they also add to the ocean freight costs by delaying vessels and discouraging the use of larger vessels and scheduled shipping services.

Calcutta faces the additional problems of siltation and a location more than 100 kilometers up the Hooghly River. Investments in container facilities and equipment in recent years have not been able to offset the problems associated with low labor productivity and limited depth at the berth. Chittagong has problems of road access for containers moving to and from Dhaka. It also has difficulties with labor productivity that remain despite investments in new facilities and equipment. Any attempt to reduce the delays and costs to cargo moving through these ports must first address management problems and the low rate of utilization of existing assets.

The second most important problem is the lack of capacity and efficiency at the border crossings. It is important to establish a set of border crossings capable of handling trucks and rail traffic that do not cause unnecessary delays because of inadequate facilities, poor management, and complex procedures. The number of these border crossings should be limited in order to reduce the cost of establishing and staffing these crossings and, more importantly, to ensure that there is a sufficient concentration of traffic to attract private sector providers of logistics services such as freight forwarding, customs clearance, and banking. Table 5.1 lists the primary border crossings and their key constraints.

The scale of operation at the border crossings can be categorized as:

- High-volume operations such as Benapole with a significant volume of traffic in both

TABLE 5.1 CONSTRAINTS AT BORDER CROSSINGS AND PORTS

Border crossing	Mode	Problem	Action
Chittagong	Water	Inefficient management and operations, lack of equipment, excessive delays and costs	Privatization of port operations and investment
Calcutta	Water	Inefficient management and operations, lack of equipment, excessive delays and costs	Privatization of port operations and investment (increased use of Haldia for Nepal)
Benapole/Petrapol	Road	Congestion	Construction; simplify procedures
Birgunj/Rauxal	Rail	Operations not yet decided	Privatize ICD operations
Bhairahwa/Notanawa	Road	Operations not yet decided	Privatize ICD operations
Benapole/Petrapol	Rail	Soon to start operations	Simplify procedures
Darsana/Gede	Rail	Long processing times	Simplify procedures. Bank and custom to be available seven days per week
Akhaura/Agartala	Road/ rail	Not open for traffic	Protocol for road and rail movement
Kakarbhitta- Panitanki	Road	Poor facilities on both borders, no customs at Banglabandh	Improve border crossing facilities; allow transit for Nepalese trucks
Burimari-Changrabaandh	Road	Insufficient infrastructure, lack of customs office, bad road access	Infrastructure investments

Source: Logistics cost study team, World Bank.

directions, including both import/export and transit cargoes. These crossings require adequate parking area for the vehicles, warehousing for cargo that is stored while waiting for documents, loading platforms for inspection of cargo and for transit shipment, and fully equipped customs checkpoint gates.

- Medium-volume operations such as Burimari that handle both import/export and transit cargoes. This crossing requires storage and parking areas as well as customs checkpoints, but on a smaller scale than a high-volume operation.
- Low-volume operations such as Banglabandh with traffic limited to transit cargo that is ei-

ther traveling in-bond under seal or has been precleared. This cargo requires only a road crossing from one country to the other with a checkpoint to verify the seal or confirm that the cargo has been cleared.

The first group of border crossings is relatively expensive to develop. The crossings require large areas for storage of vehicles or rail wagons to meet demand during peak flows and periods when there is a disruption to normal activity at the border crossing. The volume of traffic and the average processing time for customs determines the amount of warehousing and inspection facilities. The customs checkpoints should have a sufficient number of parallel gates to accommodate the normal weekly peak. The gates

should have air-conditioned offices equipped with communications equipment. Where appropriate, they may also be equipped with an automatic weighbridge. Space should be provided for the addition of new gates as traffic increases. Over time, as procedures are simplified and the number of inspections are reduced, the amount of facilities required will decrease. The increasing percentage of the cargo that moves directly across the border without handling or storage will offset the increase in traffic.

The access road to the border crossings should have sufficient width and the bridges should have sufficient strength to accommodate fully loaded trucks, including tractor-trailers. The road should widen as it approaches the checkpoint to create a waiting area large enough to handle the normal weekly peak traffic. Public investment in these border crossings should be limited to the customs facilities, such as the checkpoint and inspection area, as well as to the road or rail access. The private sector should develop the remainder of the infrastructure, such as warehousing, office space, and, possibly, parking areas.

Where possible, the customs facilities on both sides of the border should be located in a common structure and the processing should be done at the same time. If this is not possible, the opposing checkpoints should be established with a minimum distance between them and be linked by dedicated telephone and data channels. These would allow the customs officials on one side to advise the officials on the other side of information about a vehicle crossing the border.

POLICY REFORM AND IMPROVED TRANSIT PROTOCOLS

It is important to simplify the procedures for clearing vehicles and their cargo at the land border

crossings and at the seaports. The resulting increase in productivity will minimize investment in facilities and storage as well as the cost of staffing and operations. This simplification should begin with the development of a common format for the basic import/export and transit cargo declarations. A common document should be adopted for the four countries within SAARC in order to expedite the exchange of information between officials on each side of a border. The basis for this common structure has already been initiated by the decision of Bangladesh, Bhutan, and Nepal to use the ASYCUDA format for trade information. India has decided to use a proprietary format that is supposed to be compatible with ASYCUDA.

The common declaration form should be in a format that can be computerized so that the data can be easily transferred between customs checkpoints. The processing of this document should be simplified to minimize the number of signatures and copies required for clearing cargo. This form should be developed in conjunction with efforts to establish a national electronic data interchange (EDI) system. Although it is unlikely that a full-scale EDI system will be available for cross-border movements anytime in the near future, such a system will be introduced fairly soon in airports and seaports. The EDI system should also be expandable to the land border crossings, and the data entry system should provide an interface for trucking companies and railroads, as well as for airlines and shipping lines.

The existing bilateral agreements between each of the neighboring countries in the region are only a preliminary step toward the free movement of goods across borders and through countries to gateway ports. The major problems with these agreements are that they attempt to restrict the number of routes and impose cumbersome customs procedures on both bilateral trade

and transit cargoes. In amending these protocols, it is necessary to allow greater flexibility in the routing of transit cargo and to simplify cross-border procedures to reflect the efficient practices achieved elsewhere in Asia.

The problem of existing protocols is that they do not allow for unhindered movement of trucks and railway wagons across national boundaries. At the extreme, they prohibit such movements. At a minimum, they subject the vehicles and their cargo to lengthy clearance procedures even for transit cargo moving from border to border or border to seaport. One of the difficulties in developing better protocols is that the transit countries do not perceive any immediate benefits for themselves, but they do perceive security risks. Although the continuing efforts at trade liberalization and economic reform are reducing the incentives for illegal movement of goods across borders, the maintenance of secure borders remains a priority for customs authorities. Furthermore, each of the countries in the region has difficulties in providing adequate transport infrastructure for its own use and is reluctant to improve infrastructure and allow free access for adjoining countries.

The procedural problems in allowing relatively unhindered movement of transit goods across the border have been resolved by various customs unions and trade blocs throughout the world, but the mechanism of cost recovery has not. An earlier work by the Bank² suggested that the transit country obtains considerable value-added benefits in providing support services for transit movements, but the primary benefit is the participation of the transport industries in the transit countries. In lieu of such participation, it

is reasonable to collect a fee for the use of the infrastructure. It is also necessary to enforce regional and domestic regulations that will ensure safe operation and accountability of the transit vehicles. Although there are ongoing discussions regarding these issues, it is important to accelerate these initiatives and to take full advantage of international experience in resolving these issues.

Among the procedures that have been introduced throughout the world over the last decade and a half are:

- International standards for the documents used for the movement of transit goods across multiple borders,
- Replacement of hard-copy documents with EDI,
- New mechanisms for securing transit cargo to prevent it from being sold in the local economy,
- New techniques for tracking shipments to prevent the loss of cargo equipment in transit,
- New methods of inspection to eliminate delays and irregularities, and
- Improved communications between customs authorities both to facilitate cross-border movements and to identify irregularities.

MODERNIZATION OF TRANSPORT NETWORKS AND SERVICES

The plans for improving the national transport networks in each of the four countries need to address problems of capacity and quality of the existing networks as well as the need for expansion of the networks' coverage. Both investments and policy reforms are required. A number of initiatives are planned to improve currently used

2. G. Ollivier and P. N. Taborga "Development of Trade Services." Working Paper, Infrastructure Unit in Europe and Central Asia, World Bank, 1999.

routes and introduce alternative ones. To date, the efforts to develop efficient and effective transport networks in the four countries have not been completely successful. However, there are encouraging signs that recent initiatives will be more successful. The proposal to develop a golden quadrilateral of dual carriageway roads connecting the largest cities in India is an important step toward addressing the very serious problem of capacity shortages on the national road network. The investment in broad-gauge and dual-gauge track will expand railroad services and reduce rail costs for eastern Bangladesh and Northeastern India.

The conversion of the rail network to broad gauge and improvements in cross-border procedures offer the potential for a significant increase in rail's market share. This is strengthened by the growing congestion and poor maintenance of the road network, which have already eliminated the speed advantage of trucks. The increase in rail's market share will be primarily low- to medium-value cargo, especially cement, coal, boulders, and other bulk cargoes moving in large consignments.

There will also be some increase in rail's market share of container movements because of the growth in unit train operations and the expansion in Concor's operations. Better rail service will attract more boxes in areas where there is sufficient volume to justify dedicated rail ICDs. As an example, the development of a rail ICD at Birgunj will extend the handling of containers to the border and make the route to Nhava Sheva more attractive. If there is sufficient traffic volume when the broad-gauge rail connections are completed to Birgunj, unit trains could become the preferred mode for movement of high-value cargo to and from Nepal. If the new road from Kathmandu to the border that was proposed in the 1980s were to finally be constructed, then the possibility for container movements into

Nepal could dramatically change the economics of all routes to and from Nepal. The role of railroads in container transport could be greatly enhanced if Indian Railways were to make unit train operations available to major multimodal operators such as Maersk and Neptune Orient Lines (NOL). Also, if container operations could be extended to Bangladesh, the potential for moving high-value cargo, such as yarn, would increase quality assurance and reduce delays.

The critical investments for the rail network are gauge harmonization on the primary routes, procuring rolling stock for high-speed container block trains, and establishing ICDs. The former would include the extension of the dual-gauge rail in Bangladesh from the Jamuna Bridge to Dhaka, Tongi, Akhaura, and on to Chittagong, and in India up to the Nepal border ICDs. It would eliminate costly transshipments and enhance the comparative advantage of rail for medium and long distances. The ICDs would be established in Northeast India to provide container movements to the rest of India. These would provide efficient transfer of containers between modes and serve as repositioning centers for empty containers to be stuffed.

The growing congestion on the Indian roads not only reduces average travel speeds but also creates greater variance in travel times. This is expected to slow the growth in road's share of cargo movement. The expressway proposed by the Asian Development Bank from Haldia and Calcutta to Siliguri would reduce the travel time by truck, but it would not solve the problem of seaport delays. If the government is able to overcome union opposition and improve the performance of Haldia and Calcutta, more traffic will be attracted to these ports, especially cargo headed to Asia. Without significant improvements in these ports, the expressway will provide an attractive connection via the golden quadrangle to Nhava Sheva or Chennai.

The essential investments for the road network are widening the primary road links and strengthening the bridges along those routes. This would significantly reduce the cost of transport by allowing larger vehicles to operate on the roads and allow the maintenance of higher average speeds so that these vehicles will be better utilized. The major routes that are being widened and upgraded are the Golden Quadrilateral in India and the expressway from Haldia to Siliguri. In Bangladesh, the road from Chittagong to Dhaka is being upgraded.³ The links eastward to Akhoura and Agartala and westward through Benapole to Calcutta are critical links that also require upgrading.

Investments in ICDs and landports also deserve special attention. This includes (a) the completion of the ICDs along the Nepal border and their conversion to private operation, (b) the expansion of the Benapole crossing with an orientation toward increasing productivity and reducing delays rather than merely adding capacity, (c) the improvements in facilities and protocol for containers moving between Bhairahwa and Moradabad, and (d) the development of new ICDs to transfer import/export containers moving to and from Bhutan and Northeast India. The economic viability of an ICD at Siliguri would need to be examined. Within Bangladesh, Tongi in the east and Noapara in the west appear to be possible locations for ICDs.

The proposed development of a private container terminal at Patenga south of Chittagong with an inland water connection to a Dhaka ICD would offer a significant improvement over the slow and costly movement through the port of Chittagong. It would make the transit routes

through Bangladesh more attractive for high-value cargo, especially as the port would not have the problem of heavy siltation. If a private port facility were available to the south of Calcutta with good road and rail connections, it would divert substantial traffic from Calcutta.

The introduction of effective in-bond movement of cargo with minimal delays at the border and an end to transshipments of cargo between vehicles will increase the volume of high-value import and export cargo to and from Nepal and Bhutan. It would also encourage traffic between Bangladesh and India.

For the inland waterway network, the most frequently mentioned infrastructure investments are increasing the depth in specific routes and improving navigational aids to allow for night navigation. The latter is more achievable in the short run and is necessary because of the very low average travel speeds. The former would be difficult to achieve because of the current condition of the dredging fleet. Moreover, it is not required for Class I routes, which include most of those under consideration for handling cross-border traffic.

None of the proposed investments in infrastructure will be successful without a mechanism for proper maintenance of the infrastructure and efficient operation of the transport services utilizing the infrastructure. Improvements in the management of the transport infrastructure are even more important than the proposed capital investments. The primary impediment to effective use of the existing transport services is a lack of commercial orientation on the part of the public sector responsible for providing services or developing infrastructure. The trucking industry is almost entirely private and relatively efficient. However, trucks are old and small because of the small size of consignments, competitive pressure on prices, poor condition of the roads,

3. The Asian Development Bank is financing the upgrade. In addition, Japanese financing has been used to upgrade some of the bridges along the route.

and lack of enforcement of vehicle safety regulations, including annual inspections and load limits. The government needs to address the last two constraints. The maintenance of the roads (in particular the primary routes) needs to be improved dramatically. This, combined with wider roads, will allow larger vehicles to compete with the older vehicles and thereby reduce the cost of road transport.

New approaches such as toll roads, road maintenance contracts, and road funds need to be introduced to address the perennial problem of pavement deterioration and excessive road roughness. The enforcement of existing laws would produce an initial increase in transport costs as older vehicles are disqualified from operations and the amount and extent of overloading is reduced, but it will reduce the costs of accidents and increase the reliability of road transport. At the same time, it will generate mutual trust between countries regarding the safety of the trucks crossing over the border.⁴

The railroad industry remains almost entirely under the control of the public sector. The private sector manages some stations or train services on some of the less utilized routes. At the same time, there has been the largely successful effort in India to create a parastatal container rail haulage company, Concor. Despite the rapid growth in container shipments, much more needs to be done. In Bangladesh, the use of unit trains for movement of containers is much more limited. The only service is between Chittagong and the ICD in Dhaka. It handles a very small portion of the loaded box movements. Despite perennial efforts by the major shipping lines to establish their own block train operations, the railroads of

both countries have been unwilling to enter any agreements. The rail sector requires competitive services if it is to stabilize its market share.

One of the more interesting proposals for private investment and management of infrastructure and related services is the proposal to establish a container port at Patenga, Bangladesh. The port would be operated with a new ICD in Dhaka and connected by a container-on-barge service. The proponent of the port would provide and operate both facilities, thereby solving three problems: excessive port delays, limitations on truck size, and inefficient unit train operations. When the Dhaka-Chittagong highway is widened, the bridges strengthened, and rail and ICD operations improved, the movement of containers could be split more evenly among the three modes.

The four countries under discussion each have made significant advancements in liberalizing their economies and their trade policies. Both India and Bangladesh have joined the World Trade Organization. All have made concerted efforts to reduce the involvement of government in commercial activities and to create a more competitive transport sector with an emphasis on private sector operations. The amount of change is impressive when compared to the decades during which the governments focused on protecting their economies from outside competition and emphasized the role of the public sector in regulating commercial activities. Perhaps nowhere in the region is this change more evident than in India's software industry. In a relatively short time, the country has been able to establish a strong, internationally competitive industry by taking advantage of local skills and allowing for competitive forces to dictate the development of the sector.⁵ The success of this

4. The United States has recently used the argument of safety to exclude Mexican trucks from U.S. highways despite the NAFTA agreements. This form of implicit protectionism, reminiscent of similar U.S. arguments regarding flag-of-convenience vessels, should be avoided in SAARC.

5. Recent attempts by the government to introduce some form of regulation of the sector have met with extremely strong resistance from all sectors.

sector depends on efficient logistics. The software industry has taken advantage of modern telecommunications (bypassing the less efficient telephone monopoly) to reduce the cost and time of the logistics chain, thereby significantly reducing transaction costs. This has allowed private industry to mobilize its considerable intellectual resources to produce, market, and sell high-value tradable goods.

Similar changes will be required if the manufacture of garments, textiles, and yarn, the region's major export industry, is to remain competitive. So far, Nepal, India, and Bangladesh have used their comparative advantage in labor costs to produce garments for the low end of the market. They have strengthened their competitive position through experience with modern manufacturing techniques and the mobilization of domestic financing. In particular, Bangladesh and Nepal have seen a rapid growth in their exports of ready-made garments. Although intraregional trade is expected to grow as these industries direct their design and production activities toward local markets, the extraregional trade is expected to face increasing competition from China and underdeveloped countries in Southeast Asia. Once the international system of quotas is eliminated, future growth of exports from India, Bhutan, and Nepal will depend on the ability to move toward higher quality, limited run, and end products.

At the same time, the high end of the market is undergoing dramatic change. A larger segment of the market is requiring better quality and design. Computerization of the design, pattern preparation, sewing, and embroidery of garments allows countries with higher cost labor to produce better quality garments at costs that are comparable to production in low-wage countries. It also allows efficient production of the smaller size orders with more frequent changes in design that are needed to meet the requirements for changing fashion. In the next decade, it is

expected that body scanners and databases will replace traditional measurements, thus blurring the distinction between ready-made and tailored garments. Increasingly, garments will be direct ordered by the consumer with marketing and sales through the Internet. Although these changes have only just begun to appear at the upper end of the market, it is reasonable to assume that they will be adopted very quickly across a wide customer base. In this evolving situation, efficient logistics will become a necessary complement to the technological innovations. In addition to putting competitive pressure on management, these changes will offer opportunities for workers in the industry to increase their skills and to earn higher wages.

CHANGES AFFECTING FUTURE LOGISTICS

The logistics chains that serve the external trade of the region are expected to undergo significant changes over the decade. Globalization, and all its implications for increased competition in traded goods, will require substantial improvements in logistics in order to maintain competitive advantage. Both the public and private sectors must be involved in efforts to improve logistics. Changes in transit protocols and reforms in customs require coordinated actions by neighboring governments. Changes in line-haul movements must combine actions by private sector truck operators and national railways. Improvements in port performance require increased private sector involvement in operations of public infrastructure.

Changes in Commodities Shipped

Chapter 1 reviewed the growth of foreign trade within the region. It indicated a rapid growth in the value of trade. Data from the seaports indicate a rapid growth in tonnage as well. Significant growth was also observed in intraregional trade (in terms of absolute value of trade).

In Nepal, the principal export-oriented industries are ready-made garments and carpets. The former recently exceeded carpets in terms of value of shipments. The major overseas markets for ready-made garments are the United States and Germany, although the latter has declined in importance as markets became saturated with Nepalese goods. The growth of exports has been constrained by problems with quality control, availability of skilled labor, competition from India, and poor logistics. Nepal has undeveloped mineral resources, but it remains a net importer of cement and raw materials for steelmaking. Imports include a wide variety of manufactured goods as well as textiles for the garment and carpet industry. India also accounts for about 45 percent of imports in terms of value. Trade with India has increased rapidly over the last seven years, and India is now Nepal's third largest trading partner.

The major exports of Bangladesh include ready-made garments, leather goods, jute and jute goods, and frozen foods, especially shrimp. The country has had problems with quality control for shrimp exports and with insufficient textile production to meet the demands of the garment industry. The major markets are the United States and Western Europe, which account for about one-third and one-fourth of the value of imports, respectively. Although exports have increased in recent years, growth has been below expectations. Despite improvements in the road and rail network, limited coverage, poor performance, and deterioration in service during the monsoon season handicap the country's transport system.

Bangladesh imports a wide variety of manufactured goods, of which textiles and related goods account for about 25 percent. India provides about one-sixth of the total value and East Asia accounts for about one-fourth. Improved relations with India have led to an increase in trade, which will continue as new routes to Northeast

India are opened and road and rail movements across the western border improve. Although regional trade in basic commodities such as cement, grain, jute, and boulders will continue to be important, the future growth in trade with India is expected to be in medium- and high-value goods. Better logistics are urgently required for efficient truck movements across the border. If the road transport continues to suffer from congestion and the private sector participation in rail services increases, rail may provide the improved logistics.

India has experienced rapid growth in both imports and exports as a result of the liberalization of its trade policy. Traditional exports of cloth, garments, fibers, leather goods, animal feed, chemicals, and minerals have been broadened to include fish, gems, pharmaceuticals, and software. The primary destinations for Indian exports are Europe, which receives about 25 percent by value; the United States, which receives about 20 percent; and Japan and China, which each receive about 10 percent. Trade with the surrounding countries is primarily in food products, construction materials, and transport equipment, and it is now being supplemented with other consumer goods.

Imports have been increasing rapidly in response to boosting domestic production. The major imports are petroleum products, which account for more than 25 percent of the total value of imports, precious stones and metals, which account for over 15 percent, and chemicals, which account for about 12 percent. The remainder are primarily manufactured goods, most notably machinery and instruments, transport equipment, textiles, and food and food products.

The increase in trade in higher-value commodities is already putting pressure on the logistics services. Containerized shipments are increasing rapidly despite the limitations of the road

network and the ports for accommodating containers. Air freight is becoming more important, as is electronic transfer of information technology materials. Rapid improvements in logistics will be critical to sustaining this growth in trade.

In the future, it is expected that exports of textiles will experience slow growth or even a decline as quota systems are dismantled and Indian manufacturers shift investments back to India. The manufacturing sectors that are expected to increase are pharmaceuticals that exploit local medicinal plants and household consumables that are sold in Indian markets. Nepal's ability to compete in both export markets and trade with India will depend on its capacity to deliver higher-value goods in a timely manner. A major effort is needed to improve container transport and extend the movement of boxes further into Nepal. Past efforts to improve the performance at the border and at Calcutta have had limited success. As a result, it is likely that there will be considerable diversion of exports to Nhava Sheva and other seaports that offer efficient container services.

Tighter Linkages between Suppliers and Buyers

The innovation in marketing and sales currently sweeping the developed world under the aegis of the Internet will soon make its impact felt in developing countries. E-commerce, in the form of both business-to-business and business-to-customer applications, will rapidly expand during the coming decade. These applications take advantage of modern communications and information processing to reduce the cost of access to and transactions between buyers and sellers. One of the areas in which e-commerce is expected to have the most profound impacts is in marketing and sales for small- to medium-sized enterprises located outside major urban areas.

The effectiveness of e-commerce depends on the quality of both communications and logistics. The

ability to deliver products from sellers to buyers at low cost and in a timely manner requires efficient operations, not only for transport but also for packaging, labeling, storing/managing inventories, tracking, financing, and customs processing.

The logistics requirements are expected to change over time as the trade changes and as the transportation network evolves. New routes will be developed and market shares will change as the performance of different nodes and links change. The private sector participants in the major trades were asked for recommendations for new routes, which should be introduced to facilitate the movement of goods from landlocked areas. Consultants' reports focusing on different modes also produced a myriad of recommendations. This analysis has presented a means for evaluating alternatives. However, this becomes quite complex when considering different commodities and different foreign origins and destinations. Furthermore, trade is now evolving relatively rapidly, as are alternative multimodal routes. In this environment it is increasingly difficult for governments to respond rapidly to the changes in the marketplace. More and more, designated routes are becoming a constraint on trade rather than a facilitator. Although government involvement in trade facilitation remains essential, it is no longer beneficial for the public sector to restrict the mode and routing of cargo moving between border crossings or from border crossings to final destinations.

POSSIBLE IMPLICATIONS FOR BANK GROUP INVOLVEMENT

The array of instruments that are available to the Bank (and Bank Group) range from the lending, technical assistance, sector, and policy dialogue under the CAS framework to the emerging role as a knowledge bank, convenor, and partner

with other institutions' resource mobilization responsibilities.

We have attempted to examine how the Bank might play a role in regional or multinational initiatives such as this one.⁶ We have used a simple chart (Figure 5.1) that rates the key elements of the regional transport initiative on scales of ■ (low) to ■■■■■ (high) for three main criteria: (a) constraints, (b) benefits, and (c) the Bank's possible role.

Within each of these groups there are subcategories that provide more clarification. It is important to highlight that the ratings are notional ratings by the study team and are intended mainly to provide the basis for discussion with Bank staff and management.

The key constraints in the area of reducing logistics costs through improved trade facilitation systems, simplification of documentation, procedures, and other such measures are mainly institutional constraints that have the potential to have good impact or provide high benefits for increased international and intraregional trade. This is one area that would provide broad benefits to all concerned because it reduces the costs of doing business with low investment implications but high technical assistance needs. The Bank's role in its individual country operations, as well as all of its other instruments, could have a strong impact. The South Asia region has lending and technical assistance operations in trade facilitation in Nepal (Nepal Multimodal Transport and Trade Facilitation Project), and some aspects such as customs reform are being addressed in Bangladesh through the Export Diversification project. But such reforms are not being addressed in India and Bhutan. The Bank's

experience in global best practices in trade facilitation, harmonization and simplification of documentation, customs systems, policy reform, and transit procedural practices can be brought to the region through initiatives such as the Global Trade Facilitation partnership. The Bank also can play the role of a convenor, as done during the April 1999 Regional Technical Workshop on Transport and Transit Facilitation, and share global experiences.

In mode and route choice for more cost-effective transportation, political constraints and, to a slightly smaller extent, institutional constraints, have a strong influence. As Chapter 3 discussed, the political constraints here are linked to those of protocol, and shippers are constrained in their choices. The technical constraints in terms of compatibility of transport networks (such as rail gauge and load standards) and gaps in physical infrastructure networks are a somewhat lesser problem in the subregion. This is mainly because the roads are compatible and the rail problems are being corrected in Bangladesh and India. The bigger infrastructure inadequacies require long-term measures and investments. Some of these gaps are being addressed through country operations. The strategic impact of the operations, particularly on poverty, could be enhanced if the regional dimension could be more effectively and consistently integrated in country strategies. In the area of knowledge management, the Bank through advisory and analytic activity such as this one, can highlight options and provide a basis for rational decisionmaking in which the users of the systems can participate.

The third category of rationalizing bilateral and multilateral protocol is a politically sensitive area that has historically been addressed on a bilateral basis. The SAARC charter does not allow for SAARC intervention on bilateral issues. However, we have seen that several constraints in the transport logistics systems would require rationaliza-

6. The framework, of course, could also be adapted for the more traditional country operations and interaction.

FIGURE 5.1 CONNECTING THE SUBREGION: ECONOMIC GROWTH AND POVERTY ALLEVIATION

Category	Reducing logistics costs	Routes and modes for more cost-effective transport	Rationalizing bilateral/regional protocol	Promoting private sector participation
<i>Constraints</i>				
Economic	■	■■	■■	■
Political	■	■■■■■	■■■■■	■■■
Technical	■■	■■■		
Institutional	■■■■■	■■■	■■■■	■■■■
<i>Impacts</i>				
Economic opportunities	■■■■■	■■■■■	■■■■■	■■■■■
Increased international, intraregional trade	■■■■■	■■■■■	■■■■■	■■■■■
Promote competition and increase efficiency	■■■■■	■■■■■	■■■■■	■■■■■
<i>Bank Group's possible role</i>				
Country operations through CAS/comprehensive development framework (lending, technical assistance, policy dialogue)	■■■■■	■■■■	■■	■■■■
Convenor	■■■■■	■■■		■■■■■
Resource mobilization and fiduciary	■■■■	■■■■		■■■■
Knowledge management, best practice cases, analytic advisory services	■■■■■	■■■■■	■■	■■■■■

Note: ■■■■■ indicates a high rating; ■■■ is medium; and ■ is low. The ratings are those of the study team and are notional, intended to provide the basis for discussion with Bank staff and management.

Source: Bank study team.

tion of the protocols and broader consultations with stakeholders, particularly those who are directly impacted (such as shippers and exporters in the case of transit protocol). When anomalies in protocol and agreements are reduced, there

are significant gains, including increased trade, greater economic opportunities and improved efficiency through increased competition. The Bank's direct role is limited in this area. However, in our country operations and policy dialogue,

specific issues can be flagged for consideration of the relevant countries. With the Bank's matrix management structure, this could be enabled with more dialogue between country management teams. Also the Bank, if requested, can help with "good practice" cases and in-depth policy inputs.

The final category of promoting private sector participation in dialogue with governments concerns regional transport issues. The constraints on investment and operations in transport, transshipment, and logistics services are mainly institutional. The critical need for involving the private sector is well understood and the positive impacts are undeniably large. The Bank operations in infrastructure projects, particularly water supply and sanitation, have been pushing the envelope on this for some time. In the transport sector, the experience with privatization has mainly been in ports rather than in the road and rail sectors. In trade facilitation and logistics, the attempts to include private sector organizations (such as chambers of commerce, freight forwarders' associations, and shippers' councils) in a more substantive manner have begun and can be strengthened. Also, ways of promoting and sup-

porting private sector participation in provision and management of logistics services can be explored. On the knowledge management side, there is clear demand from the region for policy notes and for a forum for increased dialogue. One of the key recommendations that the public and private delegates of Bangladesh, Bhutan, India, and Nepal made at the regional technical workshop (which was again reiterated at national consultative meetings) was to establish regional committees with a mix of public and private sector representatives to promote more consistent and coherent dialogue. The private sector in the subregion has set up a four-country forum that would raise issues with the relevant governments.

Several international development and private sector agencies are involved in the region in such aspects as trade policy reform, highway improvements, toll roads, road maintenance funds, railroad improvements and privatization, port improvement and privatization, ICDs, EDI, and improved telecommunications. A more coherent effort to work in partnership with these agencies is critical for effective strategy and implementation.