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## Adequacy and Effectiveness of Logistic Services in Nepal: Implication for Export Performance

*By*

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## **Executive Summary**

This study examines the adequacy and effectiveness of delivery of logistic services and their implication for export performance of Nepal. It provides a detailed assessment of the current trade facilitation and logistics situation in Nepal, including on transportation, storage and handling services.

The results of an exploratory survey of freight forwarders and exporters conducted as part of the study indicate low level of efficiency of logistics in Nepal. This is consistent with benchmark indicators available from global databases (e.g., Logistic Performance Index, Doing Business indicators).

Compared to India and Bangladesh cost of inland transport and handling is remarkably high in Nepal as substantial cost involves in transit transportation to the sea port. Thus Nepalese exports are less cost efficient as compared to main competitors. Frequent landslides and congestion in some sections of road corridors, frequent strikes and road blocked, insecurity, illegal octroi and syndication among truck owners are the major logistic problems being faced by Nepalese exporters with in the country. Bad road conditions in certain sections of transit corridor and port congestion are the major problems in the transit country. Need of transshipment from feeder vessel to mother vessel and insurance against deflection are other problems incurring extra costs on exports.

While there are many different institutions in place to regulate logistic market, they are not able enough to eliminate syndicate or carteling particularly in road transport. Nepal has bilateral agreements related to trade logistics with India, Bangladesh and China. Also it is a member of SAFTA, BIMSTEC and WTO. Different provisions of these bilateral, regional and multilateral agreements provide scope for Nepal's export promotion through logistic development.

Women participation in export and related logistic business was also examined as part of the study. It is found to be low mainly because of lack of exposure, orientation and skill of entrepreneurship, social environment, uncertainty in property inheritance right, and level of technological know-how.

## Abbreviation

AOC	Airline Operation Certificate
BIMSTEC	The Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation
CAAN	Civil Aviation Authority of Nepal
CBS	Central Bureau of Statistics
CIF	Cost Insurance Freight
DDC	District Development Committee
DOR	Department of Roads
DWT	Deadweight Tonnage (of ships)
FTA	Free Trade Agreement
GATS	General Agreement on Trade and Services
GDP	Gross Domestic Product
GON	Government of Nepal
HDR	Human Development Report
ICD	Inland Container Depot
ITC	International Trade Center
LC	Letter of Credit
LPI	Logistic Performance Index
NEFFA	Nepal Freight Forwarders Association
NITDB	Nepal Inter-modal Transport Development Board
NLFS	Nepal Labor Force Survey
NTWCL	Nepal Transit Warehousing Company Limited
PPP	Public- Private Partnership
RBN	Road Board Nepal
RMG	Ready Made Garment
SAARC	South Asian Association of Regional Cooperation
SAFTA	South Asia Free Trade Area
SAPTA	South Asia Preferential Trading Arrangement
SRMTS	SAARC Regional Multimodal Transport Study
SRN	Strategic Road Network
TEPC	Trade and Export Promotion Centre
TIA	Tribhuvan International Airport
UNDP	United Nations Development Program
WB	World Bank
WEF	World Economic Forum
WTO	World Trade Organization
SPS	Sanitary and Phyto-sanitary
ASYCUD	Automated System of Custom Data
TBT	Technical Barrier to Trade
TEU	Twenty feet Equivalent Unit/Container

# Introduction

## A. Rationale of the study

Nepal is 147<sup>th</sup> member of the World Trade Organization. Even before it became member of WTO in April 2004, Nepal had liberalized its trade policy to a great extent. External sector reform was one of the key components of the economic reform program launched in 1985. The external sector reforms included elimination of license and quantitative restrictions on imports, a significant reduction in import tariff and foreign exchange liberalization leading to the implementation of full convertibility of Nepalese rupee in current account.<sup>1</sup> The process of trade liberalization continued and currently there is no import control through licensing and no export subsidies. However, despite having highly liberalized trade policy, Nepal's export trade has remained weak and volatile. The share of total exports to GDP has declined since fiscal year 2005/06 and estimated at only 7.2 percent<sup>2</sup> in the fiscal year 2008/09. Being a landlocked country with mountainous or hill terrain, Nepal's geography is a major constraint to realize its trade potential.

Logistic services form the basis for trade efficiency. Hence adequate and effective delivery of logistic services is critical for facilitating international trade. This is more so in case of a landlocked country like Nepal. Most landlocked countries depend on more than one transit country to gain access to port facilities. This provides a competitive element in ensuring that transit costs of imports and exports are not unreasonably burdened. But, Nepal heavily depends on Kolkata and Haldia ports as there are no viable alternatives.

There is a treaty of transit between Nepal and India. Although there are procedures outlined in this treaty, Nepal's trade through India suffers from delay and high trade costs. Clearance of goods at the Kolkata port on average takes as long as three to five days. Nepalese traders have to clear their cargoes both in Kolkata and Haldia ports and also in Nepal. Partial cargo clearance is not allowed in Kolkata. As there is syndicate among transport enterprises in Kolkata Nepalese traders do not enjoy benefit of competition while hiring containers.<sup>3</sup> Though actual data on share of transit cost in trade is not readily available, it is not to deny that Nepalese goods face high transit cost at the ports of Kolkata and Haldia in India. Due to difficult terrain and carteling of transport operators, the transport cost, a major determinant of trade flow, seems to be very high in Nepal. The cost of pre-shipment transportation in Nepal is as high as more than twice that in Bangladesh or Vietnam.<sup>4</sup> Though infrastructures, including transportation and storage, have been recognized as prerequisites for country's development, the reforms in these areas did not go in tandem with reforms undertaken in other macroeconomic fronts since 1985.<sup>5</sup> Poor and costly infrastructures coupled with low labor productivity are posing serious threats to

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<sup>1</sup> Sharma, S. Selected Issues in Trade , WTO and Nepal, Pro-public Kathmandu ,2008

<sup>2</sup> Ministry of Finance, Economic Survey, 2008/09.

<sup>3</sup> Raj Karnikar et.al, The Need for and Cost of Selected Trade Facilitation Measures Relevant to the WTO Trade Facilitation Negotiation: A Case Study of Nepal, ARTNeT, 2006

<sup>4</sup> Ministry of Industry, Commerce and Supplies, Nepal: Trade and Competitiveness Study, Kathmandu 2004.

<sup>5</sup> Khanal D. R. et al, Understanding Reforms in Nepal; Institute for Policy Research and Development, Kathmandu, 2005.

country's competitiveness.<sup>6</sup> According to the Logistics Performance Index (LPI) 2010 of the World Bank, Nepal occupies 147<sup>th</sup> rank among 155 countries.<sup>7</sup> All these indicate the need of reform in logistic sector to increase competitiveness of Nepalese exports. This study is proposed to identify reform measures for logistic sector at both policy and implementation levels in order to enhance exports from Nepal.

## **B. Literature Review**

There are several publications which emphasize on the role of logistic supports in enhancing international trade and explain relationship between logistic services and trade performance. Logistic is concerned with managing and controlling the activities along a chain of supply, from procuring materials to delivering finished goods that satisfy customer orders. In today's global economy, both suppliers and customers may well be spread all over the world. Therefore, logistic has also assumed an international dimension. More specifically exporters of many goods heavily depend upon logistic services for the efficient, cost effective and timely delivery of those goods to consumers in the import market (Sousa and Findlay 2007). The more timely, reliable and efficient the logistic supply chain, the more efficiently and reliably goods can be delivered from the point of production to point of consumption.

Logistic can be broadly defined as the range of activities required for the transportation, storage and handling of production inputs as well as finished products from producer to customer. Studies show that logistic costs have strong impact on trade. Logistic costs represent a significant portion of final consumer prices - around 20 percent in developed countries, and twice that in many developing countries (ADB/ESCAP 2009). Therefore, business community has stressed that the lowering of transaction costs related to movement of international and transit freight must be a priority in the Doha Development Round of Trade Negotiation (ITC/2004).

According to De (2008), infrastructure quality and transport costs are the two main determinants for cross-country variations of trade flow. Anderson and Wincoop (2004) have estimated transport costs for industrialized countries at 21 percent of total trade cost. This cost may be much higher in LLDCs. A 10 percent rise in transport cost lowers Asia's trade by 3-4 percent from what it would otherwise be (Brooks 2009).<sup>8</sup>

Different types of transport services may be required to transport products to export market. A 10 percent increase in maritime transport costs is associated with a 6 to 8 percent decrease in trade, but impact of maritime transport cost over time is falling, and the impact of distance between trading partners is rising (Korinek 2009). Estimates indicate that in case of manufactured goods each day saved in shipping time is worth 0.8 percent of the value of goods. (Hummels 2001). Francois and Manchin (2006) have examined the influence of institutions, geography, content and infrastructure on trade and found that export performance, and the propensity to take part in the trading system at all, depends on institutional quality and access to transport and communications infrastructure.

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<sup>6</sup> Ibid.

<sup>7</sup> Arvis et al, Connecting to Compete: Trade Logistics in the Global Economy; The World Bank 2010.

<sup>8</sup> Quoted from Trade facilitation in Asia and Pacific. ADB/ESCAP 2009 pp77

With a view to maximize trade flows, ADB and UNESCAP in their latest flagship report (ADB-UNESCAP, 2009) highlights the ways in which policy makers can approach reforms in trade related infrastructure and services. This report also provides an overview of the state of play and importance of transit trade facilitation for landlocked countries in the region, including review of Nepal-India Transit Agreement. The SAARC Regional Multimodal Transport Study (SRMTS) Report has identified several transport corridors/gateways, in the region, both existing and potential, with main focus on freight traffic. This report also provides information on major physical and non-physical barriers along the corridors/gateways that need to be addressed to make these corridors/gateways suitable for carrying enhanced intra-regional traffic.

Ojha (2006) has highlighted container security and transit insurance with high premium as major problems, among others, of Nepalese transit cargo to and from Kolkata port. In this context, author has suggested that the implementation of only behind border measures is not sufficient for the landlocked country like Nepal. Hence, the reform measures need to be dealt holistically and in a comprehensive manner from the supply chain perspective. The Trade and Competitiveness Study (MOICS/2004) also critically has reviewed logistic services available to the Nepalese traders and drawn a conclusion that reducing transport and logistics costs is critical for increasing competitiveness and there is a significant scope to do so. It also mentioned that pre-shipment transport cost accounts for 7-8 percent of the prices received by exporters.

The World Bank and IFC report in Doing Business provides information on number of documents, time and cost to export or import. Accordingly Nepal's rank in trading across the border has been continuously falling down from 136 in 2007 to 161 in 2010. Similarly the study done by Arvis et al./2010 sheds light on Nepal's falling position on LPI from 130<sup>th</sup> in 2007 to 147<sup>th</sup> in 2010.

ITC (2007) has examined the potential for future export growth of fourteen agricultural products from Nepal. Difficulty in transportation of goods due to land locked feature of the country is one of the major issues identified in this report. Likewise, there are few studies on Nepalese Ready-Made Garments (RMG) mainly focusing on impact of phase-out of the Agreement of Textile and Clothing (Action Aid and SAWTEE 2007, Dahal 2006, Shakya 2005). According to Dahal, high transaction costs, owing to inadequate transportation and logistic facilities, is one of the major factors for declining exports of Nepal. Similarly, Bajracharya et al (2004) has prepared a product-wise long term export promotion plan and stated lack of adequate space for air cargo shipment and lack of reliability in shipment through land and sea routes as problems of carpet export and higher handling cost as problem of RMG exports. Belbase and Kharel (2009) have also made a study on competitiveness of Nepalese RMG after expiry of the Agreement on Textile and Clothing and shown declining state of RMG exports from Nepal and reasons behind it. Contrary to popular belief, these studies however hardly cover the logistic aspects in-depth.

### **C. Scope and Objectives of the Study**

The scope of this study is to review existing status of logistic services available to Nepalese exporters and identify reform measures so as to facilitate exports from Nepal. For the purpose of this study, logistics is defined as transportation, storage and handling facilities required for moving goods from origin (exporter) to destination (importer).

The broad objective of the study is to evaluate the adequacy and effectiveness of delivery of logistic services and their implication for export performance of Nepal. The specific objectives of the study are as follows:

- To examine the status of logistic services both domestic and transit.
- To examine the level of adequacy and cost effectiveness of trade logistic.
- To find out the level of efficiency of trade logistic.
- To review the status of regulatory mechanism related to trade logistics.
- Critically review the provisions of trade treaties and agreements in relation to their implication on Nepal's export trade.
- To find out the status of female participation in logistic services and export business.
- To make policy recommendations for making logistic services more supportive to enhance export trade of Nepal.

### **D. Methodology and Data**

This study is based on a descriptive and qualitative analysis. Both secondary and primary data were used in the study. Secondary data were used to evaluate status of logistic services, provisions of bilateral, regional or multilateral treaties or agreements and regulating mechanisms. Secondary sources mainly include related acts, rules and regulations, provisions of treaties or agreements, studies and publications and web pages of government agencies, Nepal Rastra Bank and international and regional agencies such as WTO, the WB, and Global Facilitation Partnership for Transportation, ARTNeT, etc.

Primary data were collected from freight forwarders and exporters. An attempt was also made to get cost information from selected customs, banks dealing in export finance and payment settlement, and Balance of Payment Statistics of the Nepal Rastra Bank. However, it was found that most of export consignments were shipped on fob basis (this practically means that transportation arrangement from exporting countries port is done by importer). Hence, logistic costs are rarely available in letter of credit (LC) document and custom declaration form. Information on warehousing and delivery system was obtained from exporters and freight forwarders. Additionally, officials of NTWC and NITDB were also interviewed to obtain information on different aspects of Inland Container Depots (ICDs) and warehousing. Custom officials were interviewed to gather information on custom infrastructures. Similarly, information on female participation in logistic and export business was collected from exporters and women entrepreneurs.

The study is done in reference to three major export commodities selected on the basis of export value and their continuity. For this top five export commodities were identified and ranked for 8



continuous years from 2001 to 2008. Then, three commodities having high frequency were selected for the study. Table 1.1 shows commodity rankings and the selection of export products.

**Table: 1.1 Selection of Export Products**

Rank	2001	2002	2003	2004	2005	2006	2007	2008	Selected products
1	RMG	RMG	RMG	RMG	RMG	RMG	Carpet	Carpet	Ready Made Garment, Carpet and Ghee
2	Carpet	Ghee	Carpet	Carpet	Carpet	Carpet	RMG	RMG	
3	Ghee	Carpet	Ghee	Ghee	Ghee	Ghee	Ghee	Yarn	
4	Yarn	Jute and Jute goods	Jute and Jute goods	Jute and Jute goods	Jute and Jute goods	Jute and Jute goods	Yarn	Jute and Jute goods	
5	Jute and Jute goods	Pulses	Yarn	Yarn	Yarn	Yarn	Jute and Jute goods	Ghee	

After selection of commodities viz RMG, carpet and ghee<sup>9</sup> three major markets for these three commodities were selected applying the same method of ranking and its frequency. However export of vegetable ghee is found to be confined to India and China.

A random sample survey among 15 exporters of three major items and 15 freight forwarders was conducted with structured questionnaire to identify logistic problems. The samples represented 8 percent of total exporters of selected products and 15 percent of total number of freight forwarders. A sample of structured questionnaire with response ratios or numbers is annexed.

### **E. Limitation of the Study**

The study was undertaken within a short period of time and with limited resources. For this reason, primary data were collected from only a small number of respondents. Altogether thirty respondents were included in the survey comprising freight forwarders and exporters. All of them are from Kathmandu valley. Only few government officials related to trade logistics (i.e. Custom, NTWC, Department of Road, Department of Transport Management, CAAN, etc.) were interviewed.

Trade logistics covers a wide range of activities. However, the study is concentrated only on transportation, storage and handling facilities. The private sector of Nepal is still reluctant to provide enough information, particularly on trade costs.

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<sup>9</sup> Ghee is something like butter used to cook or lit a lamp. This is made of vegetable oil.

## I. Assessment of the Logistic Services

### A. Trade and Mode of Transport

Surrounded by India and China, Nepal is not only a landlocked but also a mountainous country with geographical difficulties in movement of goods. It lacks the access to seaport and falls into a separate category having special problems in trade. Nepal's total trade has been ever growing but exports remained volatile. As a result of surging imports and fluctuating exports, the trade deficit is continuously rising. Table 2.1 depicts trade trends of past nine years (2001-2009). The table reveals that there was negative growth in exports in the years 2001/02, and 2008/09. But it recorded a growth of 13.8 percent in 2003/04. On the other hand imports shows an accelerating rate of growth which reached to 23.5 percent in 2007/08.

**Table: 2.1 Nepal's Foreign Trade**

	US\$ in Million								
	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Export	742.1	610.6	641.9	730.6	814.7	832.9	842.4	911.5	875.1
Import	1542.5	1396.8	1598.5	1846.8	2074.3	2402.9	2762.0	3413.3	3703.4
Total Trade	2284.6	2007.4	2240.4	2577.4	2889.0	3235.8	3604.4	4324.8	4578.5
Trade Deficit	800.4	786.2	956.6	1116.2	1259.6	1570.0	1919.6	2501.8	2828.3
	Growth in Percent								
Export		-17.7	5.1	13.8	11.5	2.2	1.1	8.2	-3.9
Import		-9.4	14.4	15.5	12.3	15.8	14.9	23.5	8.5
Total Trade		-12.1	11.6	15.0	12.1	12.0	11.4	19.9	5.9

Sources: 1) Economic Survey, 2008/09, Ministry of Finance

2) Current Macro Economic Situation, Oct 2009, Nepal Rastra Bank

The Table 2.1 reveals that there is increasing trade deficit in the country and urgency of improving export sector. For export promotion it is necessary to improve logistic services. Transportation is a means of national as well as international trade. Depending upon the distance and location, physical movement of goods from producer to consumer requires different modes of transportation. It also depends on nature of goods to be traded. The national transportation system of Nepal is mainly based on surface and air transport system. Surface transport system again is a combination of road transport and railways. But railway service is still limited to certain area of Tarai, the southern plain part of country, and in worse condition. For ocean transportation, Nepal has to rely on transit countries. Mostly it uses Kolkata and Haldia ports in India. Government of Nepal initiated Multimodal Transit and Trade Facilitation Project early in 1993 for expanding the trade logistic services for its foreign trade. Inland container depots were also established in some custom stations to facilitate physical movement of goods across the border. Nepal has only one international airport. Transportation mode-wise exports and imports are presented in Table 2.2.

**Table: 2.2 Export and Import by mode of Transportation mode****(US\$ in Million)**

Type of Transport	Export 2007/08	%	Export 2008/09	%	Import 2007/08	%	Import 2008/09	%
Land transportation	598.4	65.65	553.1	63.20	2510.7	73.55	2224.7	60.07
Air transportation	155.2	17.02	154.9	17.71	281.3	8.24	498.1	13.45
Land/Sea transportation	157.9	17.33	167.1	19.09	621.3	18.21	980.6	26.48
Total	911.5	100.0	875.1	100.0	3413.3	100.0	3703.4	100.0

Source: Economic Survey, 2008/09 Ministry of Finance and Nepal Rastra Bank.

Table 2.2 indicates that both export and import of Nepal are mainly based on the land transportation. This is so because Nepal's main trading partner India is landlinked with Nepal. India accounted for 64.3 percent of Nepal's total trade in 2007/08.

Land transport occupies prime role in exports, followed by land/sea transport and air transport. The share of land transport in export was 63.20 percent in 2008/09, whereas the shares of land/sea transport and air transport in export trade were at 19.09 percent and 17.71 percent, respectively.

## **B. Transport Infrastructure and Services**

### **1. Road transport**

Nepal, being a landlocked and mountainous country, road transport has been of significant importance to link production centers with domestic and international markets. By the end of FY 2008/2009 there are altogether 19209 km roads in Nepal. It consists of 5859 km Bituminous, 4715 km graveled and 8635 km earthen roads. Currently three out of seventy five district headquarters are yet to be connected by the road. A fast track road from Kathmandu to Nijgadh (close to Birgunj, the main gateway of Nepal's foreign trade) has been recently initiated. The number of goods carrying vehicles is thus increasing. The total number of trucks and tankers registered during 1993 to 2009 stood at 25480. The southern part of the country is relatively developed in terms of roadways and also has rail-road connectivity with the border towns of neighboring India. The rail and road connection with India provide access to Indian seaports. The north-south highways in Nepal are connected to the Indian border and serve the bilateral as well as third country trade. Araniko Highway is the only north-south highway that serves trade with China, the northern neighbor.

Nepal is almost totally dependent on road transport for trade with India, which accounts for about two-third of the total trade of the country. Similarly, much of third country trade is also conducted through road and sea transport. However, road transport is constrained by a number of physical and non-physical barriers.

According to Nepal-India transit treaty, there are 26 official trading routes between these two countries, of which only 15 are active. Out of these 15 routes, only six are consistently being used. Furthermore, it is notable that around 80-85 percent of the international traffic of Nepal move through three main routes viz Birganj, Bhairhawa, and Biratnagar. The third country trade

through Birgunj route accounted for 61 percent in 2009. This clearly shows the importance of Birgunj route.

Birgunj-Raxaul-Kolkata/Haldia road corridor is the main roadway being used in Nepal's trade to and from third countries. In Nepal, the road from Kathmandu (the capital city and main business centre) to Birgunj (276 km) has a 6-7 meter wide pavement and the road condition in general is not bad. But, 36 km section from Mungling to Narayanghat in Nepal faces frequent landslides. In addition, a number of bridges along the Hetauda to Pathalैया sector are only single lane and could become a major constraint as traffic increases. Congestion at the Birganj border point is a frequent phenomenon as the custom yard for road based cargo is inadequate. The adjoining city in India is Raxaul. In India, there is a two lane road along the section between Raxaul and Kolkata/Haldia (1047 km). According to SRMTS 2006 within India, bad road conditions, particularly in Bihar, reduce truck speed to 20 km per hour over an approximately 180 km section. This consequently adds one whole day to the journey times. The slower speeds caused by the poor road conditions and breakdowns of vehicles are also seen as the contributing factor to the pilferage and theft that takes along the transit route. The Motihari- Sagauli – Ramgarhwa- Raxaul section (around 50 km), the road leading to the check-post passing through the congested town of Raxaul, a major level crossing close to the check-post and the narrow 2-lane bridge over the River Sirsiya that flows near the border are all cited as problems. There is significant congestion at the border point at Raxaul. For example, parking space at Raxaul for unloading goods for checking is not available.

In addition to aforesaid physical barriers, there are several non-physical barriers that constrain the flow of goods in this corridor. India allows trucks from Nepal to operate on designated transit routes within India. As reported by the exporters and freight forwarders, frequent strikes and road blocked, insecurity, illegal octroi, and syndication among truck owners are the major non-physical barriers to movement of goods within Nepal, including this corridor. Indian trucks are allowed anywhere into Nepal, but are given a limit of 72 hours to return to India. Nepalese trucks need entry permits for every trip to India with a validity of three months. But to the nearest market towns and rail heads in India they are allowed to enter without permit.

But imposition of bonds or undertaking at Kolkata discourages Nepalese truck owners from taking their trucks to Kolkata/Haldia although they are allowed to under existing agreements. Nepalese transit cargoes are required to be insured against deflection in India at high bond prices fixed by the Indian customs. As Indian National Insurance Company has got monopoly in this business, the insurance premium is also very high. The shipping lines do not provide a through bill of lading to Nepalese traders. Nepalese importers have to separately arrange for the land transportation and this increases the overall door-to-door cost. Such a condition favors destuffing of containers in Kolkata/Haldia, rather than be carried through as full container loads to Nepal. Custom's inflexibility regarding timing of clearance arrival of goods is also considered as a non-physical barrier. Nepalese custom offices do not process the cargo arrived after 15:00 hours on the same day. Indian regulations of quarantine have appeared as an additional non-physical barrier in case of export of foodstuffs and agro products from Nepal. It makes a delay of up to 10-12 days as India does not readily accept standards set by the Nepal Standard Bureau and samples have to be sent to Kolkata for testing. Lack of security in some

areas along Indian section of this corridor is also seen as non-physical barrier to the smooth flow of cargoes along the corridor.

The road linkage to Nepal–China border is through the 110 km. long Araniko Highway that connects Kathmandu to the border town of Zhamu (Khasa) of Tibet. The last 10 km of the road towards China border is not black topped and prone to landslide. The border point with Tibet (China) is on a bridge and the area on both sides of the border point has very difficult terrain as well. The available space in customs area is restricted with limited parking for trucks and has become seriously congested. The cartel among truck operators appears as a serious non-physical barrier in this route.

## 2. Rail Transport

Nepal has only two short rail links, one from Janakpur (Nepal) to Jayanagar (India) and next from Birgunj (Nepal) to Raxual (India). The Janakpur-Jaynagar 42 km rail link is oldest one and narrow gauge for goods and passengers. The condition of this rail line is dilapidated. The 5.4 km rail from Birgunj ICD to Raxul (India) is for goods traffic only. This railway has come into operation from July 2004 under the Rail Services Agreement signed between Nepal and India in 2004. This being a broad-gauge line has made possible to link Nepal with major cities and seaports of India. Such a linkage avoids transshipment of cargo in border. The condition of this rail line is good and operating smoothly. Currently it is being operated along Birgunj (Nepal) – Kolkata/Haldia ports corridor. This is the most significant corridor for Nepal, handling over 95 percent of rail traffic to and from Nepal. Initially, only transit traffic was allowed to move through this corridor. However, bilateral traffic has now been permitted. This corridor is on broad gauge single line from Birgunj to Muraffarpur (137 Kms) double line between Muzafarpur to Baranasi (103 Kms) and thereafter electrified double line all the way to Kolkata/Haldia port. The distance between Birgunj and Kolkata port is about 704 km and the same between Birgunj and Haldia port is about 832 Km.

In the initial phase of operation, railway carried only 20/40 ft containers on flat wagons. But now bulk movement has also been started in covered wagons since 2005/2006. During 2005/06, the total number of trains run in this corridor was 120 carrying 70 TEUs per train with resultant total TEUs of 8400. The number of train runs and carriage has substantially increased to 298 and 16298 TEUs respectively in 2008/09 (Table 2.3).

**Table: 2.3 Cargo Movement through Birgunj ICD**

	2007/08	2008/09	Growth in percent
Export			
No of trains	63	107	69.8
Total TEUs	482	852	76.8
Imports			
No of Trains	159	191	20.1
Total TEUs	13783	16076	16.6
Total			
No of trains	222	298	34.0
Total TEUs	14625	16928	15.7

Source: Nepal Inter-modal Transport Development Board

Table 2.3 also shows that total number of trains in the year 2008/09 increased by 34.0 percent over previous year. Similarly, total volume of cargo in the same year increased by 15.7 percent as compared to previous year. It is notable that the increase in volume of cargo is phenomenal in the case of exports. Growth in volume of export cargo registered as high as 76.8 percent in the year 2008/09.

### **3. Air Transport**

Air service plays an important role in international trade particularly of a landlocked country. The high value and perishable commodities are traded through air routes. Domestic air transport has a significant place in the transportation of goods to and from the hinterland and remote areas. Currently, there are altogether 53 airports in Nepal, of which only 32 are in operation. Altogether 10 air fields including one international airport have got the bituminous paved runways. A second international airport has been planned to be constructed in Nijgadh. There are 37 STOL (short take-off and landing) airports that handle small aircrafts. Currently, altogether there are 70 aircrafts of different types belonging to different airlines of Nepal.

Civil Aviation Authority of Nepal has issued Airline Operation Certificates to 47 airline companies. But only 20 airlines are operating their air service. Of them, 5 airlines are related to recreation and aviation sports and 5 companies are providing helicopter service in the supply of food, clothes, medicine and construction materials to hilly and Himalayan regions. Out of 10 airlines carrying cargoes, one serves international sectors only, while three are servicing both domestic and international sectors, and the rest six are engaged in domestic service (Economic Survey/2009).

Nepal has signed bilateral Air Service Agreements with 35 countries. Twenty international airlines companies have been operating regular air services to and from Nepal. The airport in Kathmandu is the only international airport of the country. This airport handled 17.63 million kg of cargoes (both inbound and outbound) in 2009.

#### **C. Freight Forwarding (Handling)**

Freight forwarders and custom agents or custom brokers play an important role in international cargo movement. Freight forwarders take charge of goods from exporter to importer and issue Bill of Lading on behalf of shipping companies; prepare all necessary documents for the movement of cargoes. Custom agents or custom brokers take responsibility of clearing goods from custom offices on behalf of importer/exporter. The quality and price of services provided by freight forwarders and custom agents or custom brokers inevitably affect trade competitiveness.

There are more than 100 freight forwarders working in Nepal.<sup>10</sup> Similarly there are 487 custom agents either in the form of natural person or in the form of a company.<sup>11</sup> According to customs rule, the Department of Customs or custom offices issue license for undertaking task

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<sup>10</sup> Nepal Freight forwarders Association

<sup>11</sup> Department of Customs

of customs clearance to the individuals or to the proprietor of clearing firm on the basis of examination conducted for this purpose. Only those persons, who have succeeded in the examination, are awarded the license. A Nepali citizen having passed higher secondary is eligible to sit in the examination. A cash amount of rupees three hundred thousand or a bank guarantee of equivalent amount is required to be deposited with the license issuing office by the agent to undertake the clearing job. The total number of agents has not increased for last a decade or so as there has been no examination since long.

Loading/unloading is a part of handling. In TIA cargo complex, only those loaders, who have identity card issued by the TIA office, are allowed to enter in to the cargo complex and do the job of loading/unloading. The identity card is not easily granted. It is issued only in the recommendation of freight forwarder and loader's union. Therefore, there are a limited number of loaders.

Advanced equipments are required for efficient handling of cargoes. But in most of the custom houses of Nepal, required equipments are either not available adequately or out of order. This has made handling of goods difficult and unsafe.

## **D. Warehousing, ICDs and Transit Port**

### **1. Warehousing**

Warehousing is an integral part of trade logistics. It is required in customs, ICDs and ports. It may be in the form of covered sheds, parking lots and godown, etc. The need of warehousing facility depends on the clearance procedure. Longer clearance procedure requires more warehousing facility. Similarly form of warehousing depends on mode of transport and nature of goods to be traded.

There are altogether 29 land custom main offices and one air port custom in Nepal. But in terms of volume of trade, only seven customs viz Tatopani, Tribhuban Airport, Nepalgunj, Bhairahawa, Kakarvitta, Biratnagar and Birgunj are the major customs. Birgunj customs alone accounts for 70 percent of total trade. Birgunj customs has three godowns; one for exports and two for imports. Of these three godowns, one belongs to National Trading Limited, a state owned trading company and two belong to NTWCL also a state owned company established in 1971 to manage transit transport and warehousing for third country trade. The establishment of NTWCL has been a milestone towards institutionalizing warehousing services to overseas trade. It has been operating warehouses in Kolkata Port and Birgunj Customs territory. In addition to godowns, there is a parking space for trucks in Birgunj Custom's area. The parking space is however very inadequate. Because of space limitation in the parking area for the export traffic, vehicles are parked on the road and customs clearance is given there (Kahmatullah/2006). Such problems of inadequate warehousing do exist in other land customs too.

Tatopani customs, the most important border crossing point with China, also faces a serious bottleneck. The available parking space for trucks at customs point has become seriously

congested in recent years. Hence, vehicles are temporarily using a space in Larcha dam site where 200 trucks can park.

As regards to air cargo, Nepal has only one international airport in Kathmandu, with a modern cargo complex of 10200 square meters. The full capacity of this terminal is 24000 tones of exports and 12000 tones of imports. This warehousing space is reportedly adequate but other equipments such as weighting machine, x-rays, scanner and fork lift etc are either not available or out of work. Likewise, there is no proper placement system. Goods are stored without any number or location identity. There is also a cold storage for export of perishable products. But it is not in use for the reasons that (a) it does not have temperature regulator and (b) there is no refrigerated vehicles to transport goods from cargo complex to aircraft. This shows managerial weakness in coordinating the activities related to warehousing and transportation.

## **2. Inland Clearance Depot**

Inland Clearance Depots play important role in trade facilitation of a land locked country like Nepal. Currently Nepal is operating two road based ICDs in Biratnagar and Bhairahawa and one rail based ICD in Birgunj. A fourth ICD on the eastern border Kakerbhitta is being constructed targeting trade with eastern India, Bangladesh and Bhutan. The road based ICDs are, at present, being operated simply as organized custom clearance points having proper warehousing facilities. The rail based ICD however has more simplified procedure as compared to the road based ICDs. To operate rail based ICD Nepal has signed a separate railway service agreement with India which has further simplified the clearance procedure of transit cargo.

### *(a) Birgunj ICD*

It is a rail based ICD in Nepal linked with Indian railways. Rails, locomotives and wagons of Indian railways move inside this ICD, which is 5.4km away from Indian rail head. This ICD has all facilities of handling all types of traffics including containers, bulk and break cargo. It covers 38 hectares of land and there are six full length railway lines, covered goods shed, and godowns. Fork lift, cranes and mobile truck scanner are also available there. The terminal provides space for efficient customs clearance through automation with the application of ASYCUDA.

This ICD was first started in 16 July, 2004. It has been operated by Himalayan Terminal Pvt. Ltd on lease basis. The lease agreement was for the period of 10 years and the lease amount was Rs. 956 million per annum. But the operation of ICD was below capacity and incurred a loss of Rs. 30 million in first year and Rs. 25 million in second years due to several reasons. Firstly, there was low level of movement of containers (Traders preferred to use old custom point Birgunj due to high charges of ICD<sup>12</sup>). Secondly, the shipping lines did not come to book the cargo on cif 'DRYPORT' basis. Thirdly, bulk cargo and bilateral cargo from India were not allowed to move through this dry port. Lastly, the excessive formation of capital in the ICD made its operation expensive. Therefore, a modification of leased hold fee was agreed between GON and Lease Holder Company based on the revenue sharing modality. Government of India

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<sup>12</sup> News from Nepal India Chamber of Commerce and Industry (NICCI), Year 11, April/May/June, 2007



agreed to allow movement of bilateral cargo through this ICD on 1 February 2005. A letter of exchange between GON and India has also made a provision of bulk cargo movement in covered wagon. These developments have resulted substantial increase in cargo movement through this ICD (Table 2.3). Yet, the ICD is not being used in its full capacity.

*(b) Bhairahawa ICD*

This is an important road based ICD of western Nepal. Operated by Trans Nepal Freight Services (p) Ltd, this ICD has a goods shed of 55x25m and an additional inspection shed of 36x24m area. It also has a parking area for of 250 trucks.

*(c) Biratnagar ICD*

This is an important road based ICD of eastern Nepal. This is also being operated by Trans Nepal Freight Services (p) Ltd and has a container yard of 3700 sq.m. for holding 150 TUEs; parking lot for 80 trucks; and a covered container freight station of 44x25m. There is also a vacant area of 3900 sq.m. for warehousing/parking area.

### **3. Transit Port**

Kolkata and Haldia are the two designated ports to Nepal under Kolkata Port Trust. These are the dominant ports of entry/exit or gateway for Nepalese transit cargo. These ports handle the containerized cargo which mostly passes through Birgunj, Biratnagar, Kakervitta and Bhairahawa. Kolkata and Haldia are the feeder ports linked to Singapore and Colombo. Only feeder vessel operates here. Kolkata dock locks have 154524 sq. m. of transit sheds, 167915 sq m. of open storage and 654078 kg. liters liquid cargo storage tanks. The container terminals occupy six berths which also feed the two landlocked South Asian countries, namely, Nepal and Bhutan. Container vessels of up to 16500 DWT can be handled at these berths. Kolkata port has developed online cargo and container operation system. Customs and port community are being integrated in a manner that will provide the shipping community with more prompt services through elimination of delays in the transfer of physical documents between customs, banks and shipping agencies. Haldia is also a major river port on the western bank of river Hoogly. The Haldia container terminal occupies two berths and has a maximum capacity of 1.2 million tonnes or 100000 TEUS. Haldia port has 25070 sq. m. of transit sheds and 531676 sq m. of open storage areas. Both Kolkata and Haldia ports have reached their maximum capacity and problem of congestion emerges frequently. Cargo handling equipments are old. There is shortage of storage and backup area. Improvement in these ports would facilitate movement of transit cargoes of Nepal, hence it is especially important for Nepal.

Nepal and Bangladesh signed an agreement on transit in 1976. This agreement allows Nepal to use four border crossings at Birol, Banglabandha, Chilhati and Benapole in Bangladesh. India provides access to these border points of Bangladesh through its territory. But only Birol and Banglabandha are being used for the movement of transit traffic where as chilhati and Benapole still remain unused. According to the agreement, Mongla and Chittagong ports in Bangladesh are available for Nepalese transit traffic for third country trade. Chittagong is the

premier port of Bangladesh. It is a river port handling over 20 million tones of cargos including 750000 TEUs (2004/05). This port is highly congested and operating beyond its capacity.

Furthermore, none of the container freight stations outside the port limits is allowed to handle imported cargoes, requiring containers to be destuffed within the port area. Not only does this almost defies the logic of the port being a transit facility but congests the container yards. The containers dwell time (entry and exits time) in this port ranges at 20 to 22 days, which is far above those at other ports in the sub-continent. The port has a negative image in relation to labor unrest, restrictive practices and resultant poor productivity. The port continues to rely on manpower, which lack the appropriate skills and technical training especially in relation to mechanical handling. The charges in these ports are felt high especially in relation to quality of services delivered.

Mongla is also a riverine port of Bangladesh. The port has the capacity to handle 6.5 million tonnes of cargo annually and is operating at less than 50% of its capacity. The port consists of 5 multipurpose berths equipped with dock side crane, mobile cranes and fork lift trucks, storage transit sheds, warehouses, open areas and mid-stream facilities consisting of 8 moorings berths, 21 anchorage berths, barges and floating crafts. The port is subject to labor unrest and has a high reliance on unskilled labor.

These ports are not much used by Nepal mainly due to non-physical barriers along Kakarvita (Nepal)-Banglabandha (Bangladesh) section of Kathmandu-Kakarvitta-Phulabari(India)-Banglabandh- (i) Mongla (1314 km.) or (ii) Chittagong (1394 km.) corridor. There is no permanent custom office at Phulbari border post in India. Trucks can not move freely at any time of the day in Indian section of this corridor. They must be escorted as a convoy at a time mutually agreed between parties concerned. Indian customs officers are normally informed two hours in advance of a convoy's arrival and are summoned from Phulbari customs station, 2.5 km from the border checking point. Also in Banglabandh checking point, Bangladeshi custom officers are to be summoned from Panchagarh, 50 km. away for the clearance of cargoes. In addition, cargoes are required to be transhipped between Bangladeshi registered vehicles and Nepal's registered vehicles at the Bangladeshi border. This activity causes delay and adds to costs.

In search of adequate and better port facilities, Nepal has made attempts to gain access to different alternative ports. Accordingly, it achieved access to the Bangladeshi ports. But they could not be used for reasons discussed above. Mumbai port in India has now been identified as an appropriate marine gateway for trading with Europe and Middle East. Likewise Vizag (India) is also being identified as another alternate port for Nepal's transit traffic. Nepal has approached India in this regard. However, the modalities and other arrangement are yet to be worked out.

## **E. Institutional and Regulatory Mechanisms for Trade and Logistics Facilitation**

Regulatory mechanism is required to ensure competition and to increase performance efficiency. It is equally applicable in export trade and related logistic services. Regulatory mechanism occupies more important role in a liberalized market. An optimal combination of

physical infrastructure upgrading and regulatory reform is a precondition for trade promotion. Impact of infrastructure upgrades pursued without an appropriate regulatory framework is likely to be limited, in some cases, even be perverse (ADB/ESCAP 2009). In Nepal, after opening avenues for private sector, a number of regulatory authorities were formed in different sectors. In this context government of Nepal has also established different sector wise regulatory bodies for the facilitation of Nepalese export. The main regulatory mechanisms related to export logistics are discussed below.

### **1. Nepal Inter-modal Transport Development Board (NITDB)**

Government of Nepal has established ' Nepal Inter-modal Transport Development Board in 1997 to develop the overall infrastructure for international trade. This board was established in accordance with the provision of the Development Board Act 1956. The main objective of NITDB is to oversee the management of ICDs for the facilitation of Nepal's foreign trade. To develop, manage and promote ICD terminals, leasing out management and fixation of service charges of the terminal operation are the major functions of NITDB. As one of the main function of NITDB is to develop ICD terminals for the facilitation of Nepal's foreign trade, it has so far established three ICDs in Birgunj, Bhairahawa and Biratnagar and further plans to develop ICDs in different places of the country. But the progress in this regard is slow. Currently, construction of ICD in Kakarbhitta at the Eastern Nepal/India border is under way. A ICD project in Tatopani, at Nepal/China border, was also initiated recently.

The main objective of establishing ICDs are to reduce transport cost, achieve competitiveness in export and import through reduced overhead cost, promote competitive transport services and open opportunities to private sector operators through their involvement in management and operation of ICDs.

NITDB has leased out three ICDs to the private sector for a period of 10 years. Biratnagar and Bhairawa ICDs were leased out to the Trans Nepal Freight Services Pvt. Ltd in 2002 and Birgunj ICD to Himalayan Terminal Pvt. Ltd on 2004. Both the companies are joint venture of Nepalese and Indian enterprises. Service charges of the terminal operation are fixed by NITDB board chaired by the secretary in the Ministry of Commerce and Supplies. The board is consisted of public and Private sector entities. Service charges seem to be reasonable as none of the respondents of the survey conducted in course of this study cited it as a problem.

### **2. Road Board Nepal**

Road Board Nepal was established under the Road Board Act 2000 with the aim of providing sustainable fund for planned maintenance of the roads, to keep existing roads in serviceable condition, reduce vehicle operating cost and provide more comfort to the road users. It is a self governing, and self sustaining entity based on Public- Private Partnership model. The major function of RBN is to collect, manage and allocate fund for road maintenance to the road agencies. To formulate integrated annual plan for repair and maintenance of the roads is the responsibility of this authority. The major sources of fund of the RBN are fuel levy, road user taxes and vehicle registration fees. Despite this, Government Grant and support from donors and international community are also sources of revenue of the RBN.

RBN has an executive committee of 14 persons headed by secretary in the Ministry of Physical Planning and Works. This committee consists of representatives from different related ministries, local governments, consumer forums, experts and private sector including associations of transport enterprises. The rates of tax and fees are determined by the GON, but in recommendation of the RBN, where there is representation of both service providers and users. Therefore rate of tax and fees is not considered as a problem.

The RBN mobilizes the collected fund through Department of Roads for the maintenance of strategic road network and through DOLIDAR to concerned municipalities and district development committees for urban roads. The fund is released according to the approval of Integrated Annual Plan. Out of the total fund 70 percent is allocated to the maintenance of strategic road network and remaining 30 percent for the local road networks. Maintenance works have been undertaken on the partnership basis. Hence, for use of this fund, road agencies should provide a minimum counterpart fund of 30 percent for municipalities and 20 percent for district development committees.

RBN collects fund from different sources in different ways. Road user's tax is collected by RBN itself or its agent or contractor where as fuel levy and vehicle registration fee are collected by other government agencies on behalf of RBN. It takes some time to channel money collected as fuel levy or vehicle registration fee to RBN fund, resulting delay in disbursement to the road projects. In addition, absence of people's representatives in local bodies has also impeded repair and maintenance of roads to be done in partnership with local governments. As the country is in political transition, currently, no elected representatives are there in the local bodies.

### **3. Civil Aviation Authority of Nepal**

The Government of Nepal has been following open sky policy since 1993 to involve the private sector and enhance competition in civil aviation business. Civil Aviation Authority of Nepal Act was introduced in 1996 as a first step to provide the legal framework for independent airport management in Nepal. CAAN, an autonomous regulatory body constituted under this act has the responsibility to arrange international air flights, to grant recognition to foreign airlines and entities relating to aircraft engineering and to conduct maintenance and testing of Nepalese aircrafts. Pursuant to this act, foreign investors after having prior approval from GON and CAAN are allowed to form joint ventures with national private investors. CAAN has built a Cargo complex of 12000MT capacity for international cargo in Tribhuvan International Airport. It has a wide area of parking. In this warehouse there are two cold storages with the capacity of 10 and 8 tones. But due to the lack of regulator these cold storages are not in operation. There are two X-ray machines to scan export cargo, but there is no regular power supply. In this warehouse there is no fork lift and crane service. Location lay out system is not developed till now. These are the managerial problems facing by this regulatory institution creating hurdles in export trade.

CAAN has authority to fix charges for using this cargo complex. The rate of user charges depends on used time and weight of the consignments. The prevailing charges are: up to 50kg Rs70 for seven days, for 100 to 500 kg Rs 140, for 500 to 1000kg Rs 220 and for more than

1000kg it is Rs 280. The loaders are allowed to enter into the cargo complex with the identity card provided by CAAN. The laborers have made syndicate and the rate of loading and unloading is fixed by them. This has increased cost of the trade logistics.

#### **4. Department of Transport Management**

The department was established in the year 1984 under the Transport Management Act 1984 with the objective of managing transportation throughout the country. In the year 1992 new Transport Management Act 1992 was promulgated. After 5 years, in 1997 new rules were enforced. Since its establishment, the Department is managing transport throughout the country. There are altogether 25480 trucks in operation in the country, which provide logistic services to trade and industry. The department registers trucks, charging registration fees as per Fiscal Act of the concerning year. At present it is 3 percent of the landed cost of the truck. In addition to this, the department imposes annual vehicle tax at the time of renewal of ownership certificate. As per Fiscal Act 2009 the flat rate of tax per truck is Rs10, 600. After the registration of the truck, the owner has to apply with all documents and vehicle inspection certificate to get road permit.

There is no legal barrier in entry to the transport business and no recommendation from any institution is required to get road permit. The entry is free. But in practice the permit is issued by this department only on the recommendation of Transport Entrepreneurs Association. This has created a kind of entry barrier in this business leading to higher price. This is against the competition law being enforced in the country. Inappropriate service sector regulation can create opportunities for private actors to capture economic rents or engage in anti competitive conduct, affecting sector prices and thus trade costs in goods as well as productivity in goods sectors (Francois and Wooton, 2001).

The rate of fees for route permit depends upon the distance. At present it ranges from 420 to 1750 rupees. The rate of route permit for 0-50 km is Rs.420 and for more than 701 km it is 1750 for each four months. The detail rate structure is given in Annex 4.

The rate of route permit is fixed by the department. Transport entrepreneurs are free to fix freight for transportation of goods, but it is in practice determined by the Transport Entrepreneurs Association. Therefore the price is felt very high. Such a price cartelling on the top of entry barrier through syndication has resulted high cost in logistic services. The FNCCI has complained that the syndicate system has hurt the trade and industry significantly. The regulatory mechanism proved to be inefficient in this regard.

#### **5. Customs Laws and regulations**

Customs regulate trade across the border. Laws can ensure simplification in customs procedures. Simplification of customs procedures through regulatory mechanism relieves traders from unnecessary customs formalities, and allows the traders to get released goods without delay and extra cost. This can have a positive impact in export competitiveness of the country.

Recently Nepal has implemented New Customs Act 2007 and Rules which have included many provisions in line with the Revised Kyoto Convention and other agreements. The main features of the act and rules are that they prescribe the number of documents required for the clearance. The customs rules specified 9 documents for import and 4 documents for export. But in practice the documentary requirement is much more than specified in the customs rules. The WEF's rank of Nepal in Enabling Trade Index is 117 out of 118 countries in efficiency of customs administration. This means there are certain shortcomings in customs procedures. Taking all these in consideration an Action Plan (2009-13) has been launched with an objective of facilitating legitimate trade and industry and thereby encouraging voluntary compliance. The action plan has set objective inline with international conventions and international standards as the basis of reengineering all of the customs clearance procedures including documentation, data requirement, procedures and use of risk management. Customs Act 2007 has made provisions of using selective method under clause 20. The act defines "selective method" as a system so determined by the department that any goods can be cleared, with or without examining such goods, or by examining documents only, taking into account the risks of revenue, trade, goods or other activities." During the time of physical verification of goods, the act has made provisions to open and examine the goods randomly or examine only a certain percentage of the same under clause 28(1). Thus the risk management in customs clearance has been a top agenda since last few years. In the international convention it is well documented. According to these documents the customs should conduct documentary and physical examination based on the risk assessment for facilitating the trade. The prevailing practice is to go on for the full verification of all consignment. Recently broker model and risk based selectivity model have been tested in few customs offices and implemented in Birgunj customs.

New Customs Act, 2007 has fully incorporated the WTO valuation rules, which recognizes transaction value as basis for customs valuation. There is also provision of Valuation Review Committee in line with the WTO Rules. The trader can challenge the valuation decision made by the customs offices. This has shown positive impact on the valuation. However, valuation decision has always been an area of dispute between traders and government (IPRAD/ARTNeT 2006).

**Customs Automation:** In Nepal customs automation was started in 1996 with the introduction of ASYCUDA project. At present 11 customs offices are operating this system. For this purpose a single administrative document was introduced to facilitate the declaration. But there are some shortcomings in the operation of the project. There is parallel run of manual customs process, because of lack of compatible Nepali font with the version of ASYCUDA. Customs have used limited functions of ASYCUDA such as Customs Branch Module at the client side. It has limited the benefit of the system. The system was implemented in a semi automated environment and used for duty calculation purpose only. This led to an ineffective operation system. The parallel run of manual system has resulted added time to the traders.

**Single Window Services:** A Single Window is defined as a facility that allows parties involved in trade and transport to lodge standardized documentation and/or data with a single entry point to fulfill all import, export, and transit-related regulatory requirements (UN/CEFACT recommendation No.33). The concept of single window is in very early stage in Nepalese customs. A study conducted by Department of Custom (2004) on Customs Processing Steps in

Birgunj, found that the clearance process has to be passed through more than 19 steps. This has suggested operating 'Single Customs Window'. It was implemented in Birgunj customs office in 2006 on a trial basis for overseas cargo. Processing steps were redesigned and reduced. But, these changes were not fully complying with the ideal single window in customs. Customs Action Plan (2009-13) in its objectives has included the development of single window system and its operation.

## **6. Others (Standards and Accreditation)**

In recent year's notification of technical regulations relating to TBT and SPS are increasing rapidly. TBT notification shows that the numbers of technical standards are accelerating. The growing number of technical standards and cost involved in confirmation, and complexity of certification alarms that there is the need of development of product standard infrastructure in line with international practices and agreements. It is necessary to review national quality infrastructures. WTO agreements on TBT, and SPS have set out the rules in the areas of confirmation of standard. Countries are using different standards in the ground of public health and sanitation and using quarantine measures to ensure the compliance. The notification of technical regulations are increasing and posing challenges to developing countries where the laboratories and testing facilities are not developed. Recently British importers of Nepalese Silver ornaments complained that Cadmium has been mixed in silver ornaments exported from Nepal. But there is no testing laboratory in Nepal. It is necessary to develop quality infrastructure and institutional framework to formulate policies and implement such standards and to monitor the compliance. The Department of Standard and Measurement is trying to develop a system of testing and certification but it is not well equipped to measure the export standards. The cost of testing in foreign laboratory causes extra cost and delay to Nepalese exports.

## **F. Assessment of Trade Facilitation related Treaties and Agreements**

Nepal has signed different trade related bilateral, regional and multilateral treaties and agreements. In this section an attempt is made to review provisions of such treaties and agreements in the context of their role in enhancing Nepal's export trade.

### **1. Bilateral Treaties and Agreements**

Nepal and India signed a bilateral comprehensive treaty including trade and transit in the year 1950. The trade and transit treaty was renewed in the year 1960 and 1971. Recognizing the transit right of land locked country and demand of Nepal, separate trade and transit treaties were signed in the year 1978. The transit treaty was abrogated unilaterally by India in the year 1989. Again in the year 1999 the transit treaty was concluded with the provision of automatic renewal after every seven years. After renewal it is effective till now. Nepal's transit policy remained within the periphery of securing freedom of transit within the framework of international law and convention for the most convenient, less time consuming and cost effective transit routes with appropriate facilities.

The treaty of transit between Nepal and India recognizes that Nepal as a landlocked country needs access to and from sea to promote its international trade. According to this treaty the contracting parties shall accord to "traffic in transit" freedom of transit across their respective territories through routes mutually agreed upon without any distinction on the basis of flag of vessels, the places of origin, departure, entry, exit, destination, ownership of goods or vessels. The terms "traffic in transit" also covers transshipment, warehousing, breaking bulk and change in the mode of transport of transit goods as well as the assembly, disassembly or reassembly of machineries and goods, provided any such operation is undertaken solely for the convenience of transportation.

The protocol to this treaty has laid down provisions of warehouses or storage facilities to be given on lease by the trustees of the port of Kolkata to an undertaking incorporated in India and designated by government of Nepal, mutually agreed routes and procedures of import/exports. These provisions exert facilitating impact on movement of transit goods to and from Nepal.

The protocol also include provisions aiming at checking deflection of Nepalese transit traffic into Indian market. Accordingly it is required to cover goods in transit by an insurance policy or bank guarantee or such legally binding undertaking to the satisfaction of the commissioner of Indian customs. As regards to exports, goods moving by rail up to the seaport should be covered by an insurance policy or a bank guarantee, at the option of the exporter, for an amount equal to the Indian custom duties on such goods. In case of goods moving by road in trucks belonging to Nepal Transit and Warehousing Company Limited or Nepal Transport Corporation in addition to an insurance policy or bank guarantee by exporter covering custom duties, these companies should give an undertaking to the commissioner of customs to pay an amount equal to the difference between the market value of goods in India and their CIF value plus Indian custom duties in the event of goods not reaching Kolkata customs. Similarly goods moving by road in other trucks need to be covered by an insurance policy or a bank guarantee for an amount equal to the difference between the market value of the goods in India and their CIF value. The requirement of duty insurance has been made applicable only to the sensitive cargo. This was earlier required for all kind of transit traffic. Duty insurance has to be taken for the full duty amount of Indian customs and from an insurance company authorized to do business in India on such terms and conditions to the satisfaction of the concerned commissioner of customs, which guarantee that insured amount shall become payable forth with to the commissioner on receipt of a notice. The premium varies from 1.6 percent to 2.0 percent of the value depending upon the kind of cargo. Duty insurance is burdensome to the exporter. The duty insurance to be taken at market value is raising the cost unnecessarily as such value goes up to two and half times of the CIF value of goods (Ojha/2007).

A Rail Service Agreement was also signed between the government of Nepal and India in May 2004 for operating and managing the rail services between Kolkata/Haldia ports in India and Birgunj in Nepal via Raxaul in India for transit traffic and between stations on Indian Railways and Birgunj via Raxaul for bilateral traffic. This agreement has laid down the details of procedures on movement of export and import cargo between ICD Birgunj and the port of Kolkata/Haldia. Infact this agreement provides modalities for train service operation between sea port or rail stations in India and Birgunj ICD in Nepal. As the rail mode of transportation is



generally cheaper, hassle free and takes less time, this agreement has positive impact on Nepal's export to both India and other countries.

Nepal and India entered into another agreement in 1997 to open the transit route of Kakerbhitta – Phulbari- Banglabandha for the passage of exports and imports with and through Bangladesh. This is a 55 km transit route in addition to the traditional meter gauge transit route of Radhikapur-Birol. Nepal and Bangladesh have signed separate agreements on trade and payments and on transit in 1976. The transit agreement allows Nepal to use the seaports of Chittagong and Chalna/ Khulna as well as four borders crossing at Birol, Banglabandha, Chilhati and Banapole. According to this agreement Bangladesh would provide Nepal warehouses transit sheds and open space on long term lease at the ports and other points of entry and exit for the storage, handling and breaking bulk of traffic in transit. These agreements with Bangladesh and India provide alternative access to seaports to Nepal. However, use of these ports is not significant as there are different impending factors including need of transshipment in Bangladesh border. It is mentioned in the protocol to the agreement that truck and other vehicles owned or hired by the owner of goods or his agent shall be allowed to carry the traffic in transit by road from the agreed point or entry to a port, transshipment or breaking point in Bangladesh and back. But at the border of Bangladesh cargoes are required to be transshipped between Bangladesh registered vehicles and Nepali registered vehicles. Furthermore, within Indian sector of the corridor, trucks cannot move freely at any time of the day. The trucks must be escorted by the Indian security as a convoy at a time mutually agreed between the parties concerned. Thus traffic movement between Bangladesh and Nepal along this corridor has been difficult.

All four treaties or agreements mentioned above have direct impact on trade logistic of Nepal. In addition there is a treaty of trade between Nepal and India. This treaty was revised recently in October 2009. This treaty also consists of some provisions related to trade logistics. The revised treaty has increased the number of agreed routes for mutual trade from 19 to 26. One of the remarkable features of the revised treaty is that it recognizes the Sanitary and Phytosanitary certificates issued by competent authority of both contracting countries. However it needs to satisfy the mandatory requirement of the importing country. As Nepal's capacity in this regard is low, this clause may create hassles in exporting from Nepal. However there is also a provision that the government of India, on request from the government of Nepal, will made best endeavor to assist Nepal to increase its capacity to trade through improvement in technical standards, quarantine and testing facilities and related human resource capacities. As in the previous treaty , this treaty also imposes quantitative restriction on preferential entry of four products viz vegetable fats (Ghee), acrylic yarn, copper products under chapter 74 and heading 85.44 of H. S code and Zinc oxide, from Nepal to India. Vegetable fat (Ghee), is one of the products selected for this study. Export of these quantitatively restricted products to India is also restricted through only six routes viz Kakerbhitta/Naxalbari, Biratnagar/Jogbani, Birgunj/Raxaul, Bhairawa/Nautanwa, Nepalgunj/Nepalgunj Road and Mahendranagar/Banbasa. India has canalized import of ghee from Nepal. Only a designated enterprise can import ghee from Nepal

Nepal also has a Trade and Payments Agreement with China. It was signed in 1981. In order to develop the overland trade between the two countries, three trading points were identified. Of them Kodari-Nyalam (Khasa) is the only route having substantial amount of traffic and transport facility. An agreement was signed between Nepal and China in 1961 to construct a

114 km long road from Kathmandu to Kodari under Chinese cooperation. This road has been a strong physical support to Sino-Nepal trade through land route. Kodari/Khasa is the most important border crossing point between Nepal and China. But it will become a serious bottleneck, if trade flows through this point expanded substantially, for several reasons including lack of space for parking trucks in the existing custom territory. Therefore for the smooth functioning of customs in this trade point, Nepal is making an effort to develop an ICD nearby and seeking Chinese financial support for this.

In the front of air transport, Nepal has so far reached air service agreement and MOUs with 35 countries. But there is no air service being operated to and from half of these countries. For example, Nepal has air service agreement with Australia, but there is no air service between these two countries. Many of the countries with whom Nepal has signed air service agreement are not remarkable export destination of Nepal. Under these agreements about two dozens of airlines are operating flights to and from Nepal. But there is no direct air service to most of major export market of Nepal. For example, United States of America is the largest market for Nepalese readymade garments (a product selected for this study), but there is no direct air service between Nepal and USA. Bilateral air service agreements provide route for Nepalese carriers. But international flights by Nepalese Carriers are very limited due to lack of operational capacity. Also they have limited number of aircrafts. Nepal Airlines Corporation is the only national flag carrier airline of Nepal. But it has only two old aircrafts for international flights. It has stopped its flight to Europe. Thus Nepal is not being able to take full advantage of bilateral air service agreements with different countries.

## **2. Regional Agreements**

Nepal is one of the founder members of South Asian Association of Regional Cooperation (SAARC) established in 1985. In the beginning SAARC focused its attention on non-economic agendas. But in later years it concentrated on trade cooperation and entered into South Asia Preferential Trading Arrangement (SAPTA) in 1993. The SAPTA accord attempted to reduce tariff and non-tariff barriers among the SAARC member countries. SAPTA was envisaged primarily as the first step towards the transition to the South Asia Free Trade Area (SAFTA), leading subsequently, towards a Custom Union, Common Market and Economic Union (Pant, 2005).

SAFTA was first mooted at the 8th SAARC Summit in Delhi in 1995, but an agreement to this effect was signed only in 2004 at the 12th SAARC Summit held in Islamabad. Apart from broad objective of trade liberalization, the SAFTA agreement has adopted other additional measures of trade facilitation including harmonization and simplification of trade standards and procedures and development of communication system and transportation infrastructures. The agreement also has provision of providing transit facilities to the landlocked member countries. There is also a provision to provide special and more favorable treatment to the least developed member countries. Bangladesh, Bhutan, Maldives, Nepal and the new member Afghanistan are the least developed countries of SAARC.

As integral to the operationlization of SAFTA, the Islamabad summit expressed its commitment to strengthen transport, transit and communication links across the region.

Accordingly study has been made to identify key transport corridors/ gateways to enhance regional transport integration. Some of the identified road corridors such as (i) Kathmandu-Birgunj-Kolkata/Haldia (ii) Kathmandu-Kakerbhitta-Phulbari-Banglabanda-Mongla/Chittagong have direct and immediate impact on enhancing Nepal's bilateral and third country trade. Similarly, rail corridors such as (1) Birgunj-Raxaul-Kolkata port/Haldia and (2) Birgunj-Katihar-Chittagong have special significance to the export from Nepal. The first corridor which connects Birgunj (Nepal) with the ports of Kolkata and Haldia in India is major gateway. Nepal has been using this corridor for over 95 percent of its rail traffic. The second one connects Birgunj (Nepal) to Bangladesh border for Chittagong port (Bangladesh) through Indian rail network. The study has proposed further connectivity of this corridor to Biratnagar (Nepal) through Jogbani (India). This proposed extended connectivity would provide a second rail route to approach to Bangladeshi seaport from eastern part of the country Biratnagar, which is also an industrial town of Nepal. Hence this corridor may play important role in export promotion of Nepal.

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is another effort to achieve free trade access within the region by 2017. Nepal became its member in 2004. Bangladesh, Bhutan, Myanmar, India, Sri Lanka, and Thailand are other members of this regional bloc. Agriculture, energy, fisheries, tourism, trade and transportation are the six core areas of cooperation under BIMSTEC. The framework agreement on BIMSTEC FTA was signed in 2004 in Bangkok. The framework agreement first started for trade in goods in 2006 and on trade in services and investment in 2007. However, the FTA is not yet operational. The agreement in trade in goods has provision of tariff cut or elimination on two tracks: fast track and normal track. With respect to trade in services the FTA has provision of progressive and substantial elimination of all discriminations between and among the member countries.

### **3. Multilateral Agreement**

Nepal became the 147<sup>th</sup> member of the World Trade Organization (WTO), an organization that provides forum for multilateral trade negotiations, in 2004 through accession. In the process of accession Nepal had committed to liberalize eleven out of twelve possible service sectors under the General Agreement on Trade in Services (GATS), although with certain conditions in some sub-sectors. Liberalization of sub sectors such as packaging, courier service, insurance, banking, storage and warehousing services etc has direct link with trade promotion. Greater access to foreign providers of business services will help Nepali firms reduce costs and identify new foreign markets (Chapman et al 2004). Furthermore, by being a member of WTO, Nepal's transit right has been secured. The freedom of using of transit facilities through the most convenient route is set out in the Article V of GATT/WTO. It calls on the parties to provide transit regardless of ownership of goods or means of transportation. Article V also stipulates not to impose any kind of restriction or action that delays the movement of goods in transit. It also restricts imposing discriminatory service charges. These WTO provisions in transit matters are very critical and important to Nepal, although it may lack the capacity to take full advantage of such provisions.<sup>13</sup> It is hoped that the negotiations on trade facilitation currently taking place as part of the Doha Round will further clarify the duties of transit countries to facilitate the movement of goods from and to landlocked countries such as Nepal.

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<sup>13</sup> In fact, Nepal applied for WTO membership in 1989, during a period of dispute with India over transit right.

## II. Logistics Performance: Insights from Freight Forwarders and Exporters

### A. Adequacy and Efficiency of logistic services

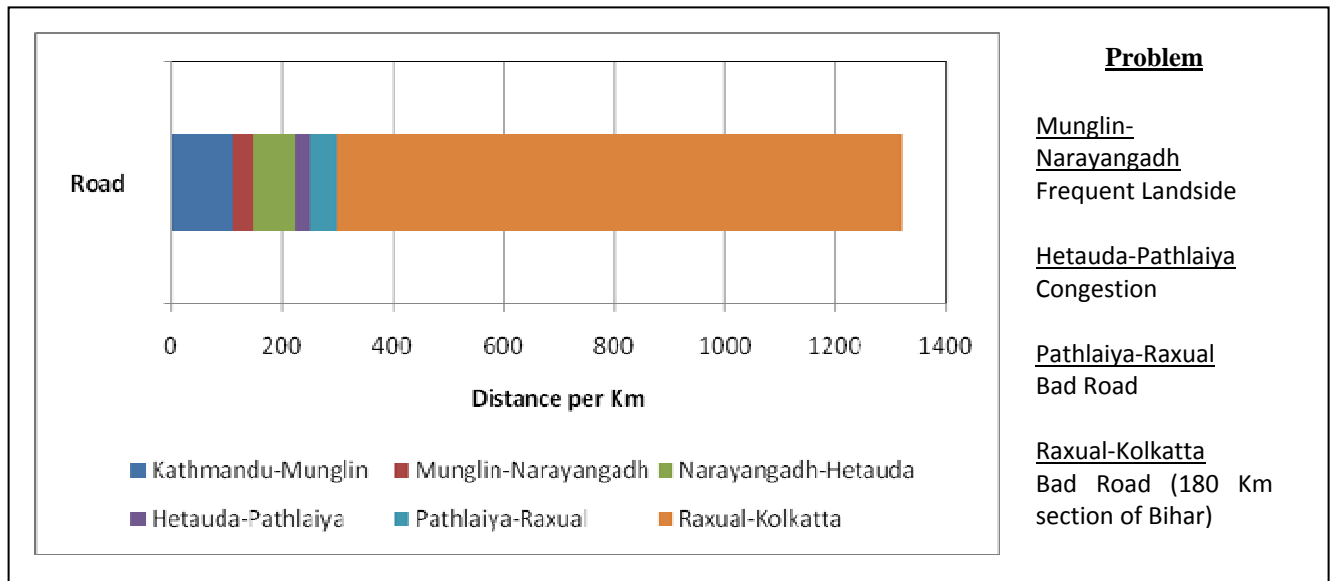
**Adequacy of trade logistic services** is measured in terms of their available quantity or volume in relation to need. Inadequacy of logistic services impedes flow of goods along the supply chain and makes international trade costly and delayed. A survey was conducted among freight forwarders and exporters to find out answers to the different questions related with adequacy of logistic services. Accordingly hundred percent of the respondents reported that trucks for carrying export consignment are available at proper time. This is so because the volume of imports is much larger than exports. Generally those trucks carrying import cargo from India are used to transport export cargo from Nepal. Many Indian trucks entered into Nepal with imported goods go back to India empty because of unavailability of export cargo. Such a situation prevails in the case of rail wagon too. The number of trains carrying export goods from Birgunj ICD is much less than those carrying import goods to it. This indicates that there is no problem of availability of trucks or railway wagons for exports from Nepal. As informed by freight forwarders availability of shipping container is also not a problem. But there is problem of inadequate warehouse and logistic equipments at customs. Custom facility related questions were also included in the survey questionnaire. Out of the total respondents 76.77 percent respondent reported that logistic facilities at custom points for export is not adequate. Information received from secondary sources and custom officials also support this result. At some customs point e.g. ICD Birgunj there is adequate facilities for export. But in other customs, facilities are either inadequate or not in operation. Congestion at the Birgunj border point is a frequent phenomenon, with the customs yard for road based cargo being inadequate (SRMTS, 2006). Such problem prevails also in Tatopani customs (near China border point). As regards to warehousing of air cargo, there is adequate space although not well managed. Similarly, availability of air space for export cargo is not reported as a problem but traffic congestion in airport is reported as a problem which often delays flights by hours. Modern logistic equipments such as scanner, test labs are not available almost in all customs.

**Efficiency of trade logistics** refers here to its quality aspect. Quality logistics help to deliver goods in time and maintain reliability of exports. Logistic efficiency is reflected on quality of services provided by the transport operators, freight forwarders, clearing agents and other logistic service providers. Efficiency of logistic services may be judged from reliability and timelines of clearance and movement of goods, and amount of hassles prevailed in the process of service delivery. Logistic efficiency is also related with marketing environment and quality of transport infrastructure.

In Nepal, there is no competitive environment in land transport, particularly in trucking service. There is undeclared but visible carteling among truck entrepreneurs. Also different sections of road corridors mostly used for Nepalese exports face problem of poor maintenance, security and frequent landslides which create disturbance for smooth movement of goods. The

road condition in Raxaul-Kolkata/ Haldia corridor particularly in Bihar section is not so good and the truck speed is reduced to 20 km per hour over an approximately 180 km section. This consequently adds one whole day to the 5 days normal journey times. This has resulted low level of efficiency in transportation of export cargos. The key problems in this major trade route are illustrated in following graphic presentation.

### Kathmandu-Kolkata Road Corridor



The LPI 2010 also indicates low level of efficiency in logistic services available to export business of Nepal. According to LPI 2010, in logistic quality and competence, Nepal stands at 143<sup>th</sup> rank. In timeliness it's rank is 139. India and Bangladesh stand at 40<sup>th</sup> and 96<sup>th</sup> rank in the case of logistic quality and competence and 56<sup>th</sup> and 70<sup>th</sup> rank in the case of timeliness, respectively. However custom clearing time is less in Nepal as compared to India and Bangladesh. According to LPI 2010, custom clearance of export cargo takes 1.41 days in Nepal, whereas it is 3.45 days in India and 4.47 days in Bangladesh. The LPI 2010 figure as regards to time taken in custom clearance of export cargo in Nepal is close to the result of the survey conducted in course of this study. According to the survey result, the clearance time is 1.6 days. It was two to three days in 2005 (Rajkarnikar et al 2006). This shows increase in efficiency in custom clearance. However there are inefficiencies in other aspects of logistic services. Even the custom services have not been improved to the expected level.

As part of the survey conducted in this study various questions were asked regarding the logistic efficiency in export trade. Out of the total respondents 40 percent reported that the custom procedures are not yet simple and facilitating to exports. Similarly about 33 percent reported that there is problem in receiving the railway wagon in time. Likewise, about 23 percent respondents quoted that it is not easy to get the shipping container in time.

**Table: 2.4 Efficiency of Logistic Services**

	<b>Services</b>	<b>Efficient</b>	<b>Inefficient</b>
2	Simplification of Customs procedures	18(60)	12(40)
3	Allotment of Railways wagon	20(66.67)	10(33.33)
4	Allotment of shipping containers	23(76.67)	7(23.33)

Source: Field Survey, 2009.

Note: Figures in parenthesis indicate percentage of respondents

It shows that the efficiency of logistic services is not satisfactory and there is need of reform. Chi square test also support this at 5 percent level of significance. New Customs Rules have specified number of documents required for import and export. But in practice exporters or their agents are asked to submit much more documents than specified in the Customs Rules. Thus the custom procedure remains complex.

The Doing Business 2010 indicates that the time taken for Nepal's export to third country via land /ocean route is 41 days, which is 141 percent more than that of India and 64 percent more than that of Bangladesh (Table 2.7). Thus, level of efficiency of supply chains involved in Nepal's export trade is lower than that of India and Bangladesh. The result of survey mentioned above shows that the time taken for export to third country via land/ocean is 46 days, which is even more than the time stated in Doing Business 2010. Although there is some difference between the survey result and DB data, a conclusion can be easily drawn that the level of efficiency of supply chains involved in Nepal's export trade is low as compared to India and Bangladesh.

### **B. Cost Effectiveness of Trade Logistics**

Trading cost depends on the different activities involved in doing business of particular products. It also depends on the cost of the logistic services including services of shipping lines, airlines, express curriers, trucking and handling companies, railway companies, freight forwarders, custom brokers, banks or finance companies, insurance companies, seaport and airport operators, international rail terminal operators, inland container port operators, cargo handlers and handling agents, warehouse operators, transit shed operators, independent testing and inspection companies, sanitary and phyto-sanitary service providers and information and technology service providers etc. All these costs of a trader constitute transaction cost. These costs can be direct or indirect.

There are different indicators that show a countries position in terms of cost of trading across the border. Doing Business measures the procedural requirements, including the numbers of necessary documents and the associated time and cost (excluding tariffs), for exporting and importing by ocean transport. According to Doing Business 2010, Nepal's rank in terms of trading costs across the border has gone down from 136 in 2007 to 159 in 2009 to 161 in 2010 among 183 countries. Similarly, the Logistic Performance Index 2010 has placed Nepal at 147<sup>th</sup> rank among 155 countries. It was 130<sup>th</sup> rank in 2007. These indicators present a weak and deteriorating picture of Nepal in terms of cost efficiency in export business.

This study analyzes cost effectiveness of Nepalese exports based on selected three major exportable items viz RMG, carpet and ghee. To estimate the logistic cost of export a small

sample survey was carried out among exporters, custom agents and freight forwarders asking information on various components of logistic cost. The survey included both small and large exporters. Altogether 30 respondents participated in the survey. The logistic cost constitutes the cost of transportation, warehousing, load/unloading, clearing and miscellaneous costs.

USA and Europe are the major markets for RMG and carpet respectively, while vegetable fat (ghee) is exported to India and Tibet, the Autonomous Region of People's Republic of China. A combination of land and sea route is used in export of RMG and carpet whereas ghee is exported through only land route. The logistic costs involved in exporting these commodities to major markets are presented below separately.

**Table: 2.5 Logistic Cost for Export of RMG and Carpet**  
(In USD\$ per TEU)

Particular	Average	Percent
Freight up to custom	181.13	5.96
Freight from Border Customs to Kolkata port	569.54	18.73
Warehousing cost	68.0	2.24
Load/Unload	193.42	6.36
Clearing cost	338.54	11.14
Miscellaneous	258.34	8.5
Sub total	1608.97	52.93
Kolkata Port to Destination*	1430.88	47.07
Grand Total	3039.85	100.00

Source: Field Survey, 2009

\*Average of major markets

As a landlocked country, Nepal requires transit facility from India for trading with the third country. Nepalese trade bears the multiple stages of transportation cost in the process of third country trade. In this context, transportation cost from Kathmandu to border custom to seaport to destination are included in the export trade. Survey data indicates that the average total logistic cost for export of per twenty feet containers (TEU) of selected commodities is US\$ 3039.85. The logistic cost includes the cost of transportation, warehousing, clearing, and charges of forwarders and miscellaneous. In the total logistic cost, the share of transportation cost is 71.76 percent. The warehousing cost is about 2.24 percent. Clearing, load/unload, fee and charges of freight forwarder and miscellaneous cost stands at 26 percent of total logistic cost for export trade. The transport cost of Kolkata port to destination accounts for 47.07 percent of total logistic cost. As Nepalese export cargoes need to transship from feeder vessel to large vessel, the cost of ocean transportation for Nepal is also high as compared to other countries. The movements of Nepalese export cargo of a twenty foot container through Mumbai port would save US\$ 400 in comparison to routing via Kolkata-Singapore (Ojha 2007).

**Table: 2.6 Logistic Cost for Export of Vegetable Fat (Ghee)****(In USD\$ per Truck)**

<b>Particular</b>	<b>India</b>	<b>Tatopani*</b>	<b>Average</b>	<b>percent</b>
Freight cost up to Custom	41.33	232.25	117.7	29.01
Freight cost Custom to Destination	229.33	141	194	47.83
Loading/Unloading charges	32.66	11.4	24.16	5.96
Clearing Charges	17.33	23.0	19.6	4.83
Miscellaneous	45	58	50.2	12.37
<b>Total</b>	<b>365.65</b>	<b>465.65</b>	<b>405.66</b>	<b>100.0</b>

Source: Field Survey, 2009

\*Nepal border to China

Vegetable Fat (Ghee) is exported to India and Tibet, China through land transportation. Total logistics cost per truck of vegetable fat is US\$ 405.66 according to the survey results. The share of transportation cost in total logistics cost is 76.83 percent. Loading /unloading charges is 5.96 percent. Other (custom clearing and miscellaneous) cost stand at 17.21 percent.

This study has made an attempt to collect cost data from different sources. Most of the exports from Nepal take place on Fob basis. However data on freight cost was collected from bank documents where export took place on CIF basis. Although such case is rare, the available data reveals that freight cost accounts for 9.4 percent of export value of RMG and carpet in case of air cargo and only 3.6 percent in case of the cargo moving through land and sea route. According to Anderson and Van Wincoop (2004), freight costs accounts for 11 percent in industrialized countries. Hence in absolute term freight cost in Nepalese export does not seem high. But price competitiveness is a relative matter. So cost should be analyzed in relation to competitors. When compared with India and Bangladesh Nepal's trading cost appears to be remarkably high.

**Table: 2.7 Bench marking of Nepal's cost of Trading across the Border**

<b>Nature of export procedures</b>	<b>Nepal</b>		<b>India</b>		<b>Bangladesh</b>	
	<b>Duration Days</b>	<b>Cost US\$</b>	<b>Duration days</b>	<b>Cost US\$</b>	<b>Duration days</b>	<b>Cost US\$</b>
Documents preparation	14	289	8	250	14	290
Customs clearance& Tech control	4	300	2	120	3	120
Ports & Terminal handling						
Inland Transport & handling	4	275	3	175	5	420
	19	900	4	300	3	140
<b>Total</b>	<b>41</b>	<b>1764</b>	<b>17</b>	<b>945</b>	<b>25</b>	<b>970</b>
<b>Nature of import procedures</b>						
Documents preparations	14	300	8	390	20	455
Customs clearance & Tech Control						
Ports & Terminal handling	5	300	4	120	3	135
Inland Transport & Handling	4	275	6	200	4	585
	12	980	3	250	2	200
<b>Total</b>	<b>35</b>	<b>1825</b>	<b>20</b>	<b>960</b>	<b>29</b>	<b>1375</b>

Source: Doing Business 2010 IFC/World Bank



Table 2.7 shows that the cost of doing export business in Nepal is around 82 percent more than Bangladesh and 81 percent more than India. The time taken in the trading process in the Nepalese export is 141 percent more than India and 64 percent more than Bangladesh. The cost of inland transport and handling is remarkably high in Nepal as substantial cost involves in transit transportation to sea port.

The survey conducted on the selected commodities (RMG and carpet) for this study shows that the logistic cost of export for up to sea is US\$ 1608.97 (Table 2.5). It does not include the document preparation cost and time cost. Still it is high as compared to Bangladesh and India. (Table 2.7) Bangladesh is a main competitor for readymade garments and India for woolen carpet. This indicates that the both RMG and carpet are less cost efficient as compared to main competitors.

Although different cost items are not one to one comparable, this study has made an attempt to prepare a comparative table presented below to identify the areas where cost efficiency is low. As shown in the table, as compared to Bangladesh, cost of inland freight and custom clearance is high in case of Nepalese exports. Similarly cost of port and terminal handling as well as custom clearance is high in the case of Nepalese exports as compared to Indian exports. Nepal has to bear additional burden of a substantial cost of freight in transit. As compared to Bangladesh and India, Nepalese exports take much longer time. If the time cost is considered, cost efficiency of Nepalese exports further decreases.

**Table: 2.8 Comparative Logistic Costs**

(US\$ per TEU)

Activities	Nepal <sup>2</sup>	India <sup>1</sup>	Bangladesh <sup>1</sup>
Inland freight	181.13	300	140
Port and terminal handling	261.42	175	420
Custom clearance	338.54	120	120
Miscellaneous	258.34	-	-
Freight in transit	569.54	-	-

Sources:

- 1) Doing Business 2010 The World Bank
- 2) Field Survey, 2009

In addition to the above mentioned costs, Nepalese exporters of sensitive goods have to bear a cost of insurance premium or bank guarantee against the deflection of Nepalese transit traffic into Indian market. Most of the major exportable items including RMG carpet and ghee are included in the sensitive list. The premium is as high as 1.6 to 2.0 percent of the value of export cargo. Such an additional burden weakens the cost competitiveness of Nepalese exports.

### **III. Women Participation in Exports and Export-related Logistic Services**

#### **A. Status**

Women are not only strong family pillars but also responsible citizens of a country for its development. It is now realized that healthy upbringing of the status of women can also boost up healthy development of a nation. A country's development depends very much on women involvement in economic activities.

Nepalese women share 50.04 percent of the total population (CBS 2001) but they comprise only 40.38 percent (CBS 1997) of the economically active population and 90.35 percent (CBS 1991) of them are involved in agriculture and agro based activities. In gender development index, Nepal ranks at second lowest in the South Asia (UNDP, HDR 2004). This gender disparity is extensive, both in urban and rural areas. Nepalese women were found to contribute 50 percent of the family income as against 44 percent by men and 6% by children. Thus the capacities of the women should not be under estimated even in the business sector. Women are capable of exploiting economic opportunities including trade. But in a country like Nepal, it is very difficult for a woman to maintain a separate and independent livelihood. The patriarchal culture has rendered the status of women very low in every field, for example education, property right, economic activities of agriculture and non-agriculture sectors. Additionally, lack of state obligation towards women's equality, that is gender discrimination, is also the major constraint for their economic empowerment.

In the changing era of women development, it is essential to play a new economic role by the women. Most of the women of Nepal live in rural areas. It is observed that the migration rate of rural uneducated and poor women in search of better jobs or wage employment from rural to urban areas has been increasingly high in recent years. They work in industries such as carpet weaving, textile, handicrafts, garments, poultry, fabrics, plastics, soap, nurseries, designing, dairy, knitting etc.

According to the Nepal Labor Force Survey 2008, total number of currently employed persons is 11779 thousand. Based on the classification of the industry 26.1 percent people are engaged in non agricultural sector. Within the non agricultural sector employment 67.96 percent are male and rest 32.04 percent are female. The exact number of females involved in export and related business or ratio of their participation in such business is not known. But there are some indications that reveal low level of female participation in this sector. According to the survey carried out under this study, female employment in export trading accounts just 5.6 percent. According to women carpet entrepreneurs, they constitute about 5 percent of total carpet entrepreneurs. Similarly, Belbase and Kharel (2009) found that out of nine RMG exporting firms; only one belonged to a female.

Among the non-agricultural industries 6.43 percent of the people are involved in the logistic services (Transport, storage and communication). Out of this, share of female participation is only 0.25 percent. There are altogether 100 freight forwarders providing trade logistic services. A survey was conducted among 30 firms including freight forwarder and

exporters to find out the participation level of the females in the field of trade logistic services. According to the survey respondents, 457 people were employed in 30 firms. Among them, 85.78 percent were male and 14.2 percent were female. Survey data shows that the female participation in logistic services especially in transport, storage and communication sectors are low as compared to male. But this percentage is higher than the NLFS data of 2008. This indicates that the female participation in the trade logistic sector has gradually increased in the recent years.

**Table: 3.1 Employment in Exports and related logistic services**

	No	Percent
Male	392	85.78
Female	65	14.2
Total	457	100

Source: Field Survey, 2009

Although female participation is low in export trading and related service business, their participation in manufacturing of major exportable products viz carpet and RMG is substantial and significant. According to available data 65 percent of the carpet and garment processing jobs are carried out by the female labor. Women's involvement in these sectors has number of qualitative impact such as building self confidence in decision making, achieve pride of income generation and group solidarity.

But the situation of women is still very pitiable though the growing percentages of women are now coming into business and trade. The job requiring high responsibility, technical knowledge and supervising skills tend to be filled predominately by men. Even those women who have some knowledge and have entrepreneur skill also need to balance their business and household works. Hence, most of the ventures taken by women are monitored by their spouse and others. Therefore in carpet and garment industries only some jobs are designated as "Women's Job" and Women indeed tend to concentrate only in these jobs. These industries give women very low profile jobs like wool balling, knitting, weaving, dyeing etc. Administrative jobs are dominated by men. The majority of women employed in garment is predominantly work as semi-skilled and unskilled workers. They mainly engage in manufacturing and packing jobs. Very few women near about 5 percent are performing supervisory, marketing, and managerial and delivery function.

## **B. Constraints**

There are different constraints that impede women entrepreneurs/women employees to enhance their business skills and role in export trade and related logistic service business. Firstly, the concept of women entrepreneurship itself introduced very late in Nepal. Hence women lack business exposure. Not only export and related business, the entire business sector was dominated by male. So it is no wonder that the level of female participation is low in export and related logistic sector, which require specialized business knowledge and skill. Secondly, it is but natural that women are physically weak and they cannot do heavy jobs. There are a number of hard jobs such as load/unload and handling of heavy goods in carpet business. Thirdly, Nepalese women working outside the home have dual responsibilities of home and outside. They face the

restriction of mobility, which is regarded as a very essential element in export trade, and related logistic services particularly in the business of freight forwarding and custom clearing. Also freight forwarders or customs agents need to work even in public holidays. Because of their household responsibility and engagement, women do not prefer such a time demanding job. Women prefer a job to be done within fixed time and at a fixed location. Fourthly, women in general are found in less risk taking jobs. They love a moderate risk situation with a fairly reasonable chance to win. As they avert high risk, consequently they loose the proprietorship. Fifthly, logistics business demands wide networking and social relations which may not be established by women due to negative attitude of the society towards such activities. Sixthly, logistic business, particularly freight forwarding business requires high skill in information technology, which most of the women in Nepal do not have. Lastly, besides, lack of exposure, lack of time, lack of entrepreneur orientation, lack of positive attitude of society, lack of required skill, uncertainty in inheritance right has further discouraged the women to be involved in high risk taking and hard jobs.

## **IV. Findings and Recommendations**

### **A. Findings**

Major findings of the study are as follows:

#### **1. Trade and Transport**

1. The foreign trade of Nepal has been growing rapidly in each year. However, exports remained weak and volatile. Exports accounts only for about one fourth of imports.
2. Nepal's foreign trade is mainly based on land transport. This is so because Nepal's main trading partner India is land linked with Nepal. The share of land transport in export was 63.20 percent in 2008/09.
3. The national transportation system of Nepal is a combination of surface and air transport. Railway service is very limited to certain areas of terai (plain land of southern belt of Nepal). Nepal has 52 domestic and one international airport. Twenty international airlines are operating regular air service to and from Nepal. However, there is no direct air link with most of major export markets.
4. Being a landlocked country, Nepal does not have her own seaport. Therefore its ocean trade is taking place mainly through Kolkata/Haldia ports of India. Nepalese export cargoes are transported from Nepal border to Kolkata/ Haldia either by truck or by rail.
5. There are 26 official trade routes between Nepal and India. The trade flow to and from third countries through Birgunj route accounts for 61 percent. Hence Birgunj- Raxaul-Kolkata/ Haldia road corridor is the main transit roadway being used in Nepal's foreign trade.
6. The 5.4 km rail from Birgunj ICD to Raxaul (India) connects Nepal to the Indian railway network. Birgunj-Raxaul-Kolkata/Haldia corridor is the main rail corridor connecting Nepal to the seaport and handling over 95 percent of rail traffic to and from Nepal.
7. Congestion at Custom Yards is an impediment to Nepalese export. In Tatopani custom point there is limited space which result congestion. Similarly, in Birgunj custom (not in ICD) there is limited space which has created congestion to Nepalese cargoes. Likewise in Kolkata/Haldia there is huge congestion of transit traffic and the local traffic that cause delay and hassle to export trade.

#### **2. Regulation**

1. Department of Transport Management is a sole agency for managing land transportation throughout the country. There are 25480 trucks providing transport logistic to trade and industry. Route permits are provided only on the recommendation of Transport Entrepreneurs Association. This has created entry barrier indirectly. Similarly there is

carteling in fixation of freight. It has created anti competitive environment in logistic market leading to higher price.

2. There are more than 100 freight forwarder and 487 custom agents working in Nepal. According to customs rule custom agents are required to obtain license from the department of customs or custom offices. The department of customs or custom offices grant such license on the basis of examination conducted for this purpose. Only those who get success in the examination can be a custom agent. The total number of agents has not increased for last a decade or so as there has been no examination since long. Neither the department of customs nor any custom office conducted an examination to increase the number of custom agents.
3. In international airport cargo office the loaders are managed by clearing agents themselves. However, the entrance identity card is issued by the TIA office at the recommendation of concerning clearing agent and loader union. There is a kind of syndicate to fix the loader charge which result increase in cost of trade.
4. There are different institutions to regulate logistic market. But they are not able enough to eliminate syndicate or carteling particularly in road transport.

### **3. Warehousing and ICD**

1. The TIA customs has a modern cargo complex of adequate area with cold storage facility for perishable products and modern equipments. But it is not well managed. There is frequent shortage of power supply in TIA cargo complex. The power shortage is affecting continuous working environment and operation of X-ray scanning and weighing equipment.
2. There are two road based and one rail based ICDs currently being operated in Nepal. Birgunj ICD has all facilities of handling all types of traffics including containers, bulk and break cargo. But facilities in other ICDs are either inadequate or not in operation.

### **4. Transit & Port**

1. Bangladesh has designated Chittagong and Mongla ports for Nepal's transit trade. India has agreed to provide Kakarbittha-Fulbari-Bangladesh route for the passage of export and import with and through Bangladesh. Nepal has signed an agreement with Bangladesh to use these ports. This agreement provides alternative access to Bangladesh seaports. However, use of these ports is not significant as there are different problems, including transshipment of cargo in Bangladesh boarder. Within India trucks cannot move freely. It must be escorted by Indian security at a time agreed between two parties.
2. Kolkata/Haldia ports are the two main sea ports used in Nepal's foreign trade. They are reverent ports and only feeder vessel can enter into these ports. Transshipment of Nepalese exports cargoes in to mother vessel takes place at Singapore or Colombo. This has resulted extra cost and time for Nepalese exports. Hence Nepal has been searching

alternative ports. Negotiation is going on to get access in of vizagapattnam port in India. In the past also Nepal had made effort to get access to Bangladeshi ports, which has been materialized. But these ports are not being used for various reasons. Access to multiple ports is essential. But Nepal should be able to identify those ports which can be really used in practice.

### **5. Custom**

1. ASYCUDA is still not fully utilized in all custom points. Only branch model is in operation. This is used for tariff calculation. Recently selectivity and broker model has been tested in few customs points. The system is still implemented in semi automated environment, leading to ineffective operation. The parallel use of manual system has resulted more time to traders, as they have to follow both systems.

### **6. Efficiency of Logistic Services**

1. The quality aspect of logistic service is still not satisfactory. The carteling and syndicate system of transport services has deteriorated quality of services. Besides this the custom procedures are also not hassle free. The documentary requirement for export is still more than stipulated in custom rules.
2. According to the result of survey done for carpet and garments, it takes 46 days to complete a export transaction, which is even more than the time stated in Doing Business 2010. The time required for completing a Nepalese export is at least 141 percent more than that of India and 64 percent more than that of Bangladesh. This indicates the lower level of efficiency in Nepal as compared to India and Bangladesh.
3. Different indicators present a weak and deteriorating picture of Nepal in terms of cost efficiency in export business. Freight cost constitutes major share (71.76 percent) of total logistic cost. However it accounts for only 9.4 percent of export value in case of air cargo and 3.6 percent in case of the cargo moving through land and sea route. Thus in absolute term freight cost in Nepalese export does not seem high. But when compared to India and Bangladesh Nepal's trading cost appears to be remarkably high.

### **7. Cost Efficiency**

1. Being landlocked country Nepalese exports has to bear additional cost in transit. As Nepalese export cargoes need to transship from feeder vessel to mother vessel the cost of ocean transportation for Nepal is also high as compared to other countries. These factors along with others have made Nepalese exports less cost efficient.
2. The growing number of technical standards and cost involved in confirmation and complexity of certification alarms that there is need of standard infrastructure. However, there is no quality testing laboratory in Nepal. This cost of testing in foreign laboratory causes extra cost and time to Nepalese exports.

## **8. Adequacy of logistic Services**

1. There is no problem of availability of trucks, railway wagons, shipping containers or air space for Nepalese exports cargo. But there is problem of inadequate warehouse and other logistic equipments at customs. Except in ICD Birgunj, custom facilities are either inadequate or not in operation.

### **B. Recommendations**

1. To harness the opportunity generated by globalization Nepal should create competitive environment in logistic service, especially in transportation and transit transports.
2. The domestic road conditions are fragile, affecting smooth movement of goods. So there is requirement of regular maintenance and development of road transport inside the country. There is the need of fast track routes to reduce traffic congestion. Rail connected ICDs should be developed in other main custom points too. Similarly, it is necessary to develop second international airport. Direct air connection to export markets should be developed. The proposed fast track route from Kathmandu to Nijgadh and second international airport in Nijgadh would in long run play a very important role in export promotion of Nepal. So as long term measure these projects should be expedited.
3. The syndicate system of transport entrepreneurs in the country should be abolished and tariff should be either fixed by government or be determined by market force.
4. Custom Act and Rules 2007 should be implemented in its spirit. There is the need of reform in advance ruling which is currently being applied in valuation only, it should be provisioned in classification too.
5. ASYCUDA should be implemented in full speed to reap its benefit.
6. The testing laboratories should be developed to face the challenges of notification by other countries to measure SPS and TBT. The certification agency should be accredited by international standard organization (ISO)
7. It is suggested to hold tripartite agreement among Nepal, India and Bangladesh to facilitate use of Nepal ( kakerbhitta),- India (phulbari/ radhikapur) – Bangladesh road corridor. Besides recent initiative to get access to Visagaputtanum port (India) where mother vessel can be used should be materialized as soon as possible.
8. Access to multiple ports is important. In this context Nepal gained access to two Bangladeshi ports. But they are not in effective use. So Nepal needs to do enough homework while identifying appropriate alternate ports. Their viability in terms of distance, cost, available infrastructural and administrative facilities etc should be thoroughly studied.



9. The process of fund flow to Road Board should be simplified.
10. The carteling by loaders with the strength of union should be abolished to reduce the cost of export.
11. Regular power supply system should be developed in both TIA and land customs to operate the custom procedures smoothly.
12. The licensing examination of customs agents should be conducted regularly.
13. To encourage the involvement of women in trade and related logistic service sector, certain fiscal incentives such as rebate on tax and government fees should be provided to the women entrepreneurs.
14. There should be certain reservation to women in customs agent licensing system. At the same time awareness program should be developed to change social attitude.

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## Appendices

### Annex I : Questionnaires

#### A. Logistic related Questionnaire for exporters and freight forwarders

1. Name of the firm: optional
2. How many days it takes to dispatch the consignment for export after the arrival at custom premises? .....days.
3. Are there separate facilities for export at custom point? Yes/ No
4. Are customs procedures simple and facilitating to export? Yes /No
5. Is it easy to manage railway wagon in land route? Yes / No
6. Is it easy to manage shipping container for export? Yes/ No
7. Is there any involvement of female employees in your export business? Yes /No
8. How many total employees are engaged in your export business? .....
9. How many women employees are involved in your export business?...
10. Are the trucks for carrying export consignment available at proper time? Yes / No
11. How many days it takes to deliver the consignment at destinations? ....
12. Have you any problem / suggestions?
  - a.
  - b.

#### B. Cost related information Format (Please give following information)

1. Name of the country exported...
2. Place of export...
3. Export quantity...
4. Export Value:
5. Mode of transportation used:
  - a. Container truck
  - b. Railway wagon
  - C. others

6. Transportation cost:
  - a. From factory to custom ... to Kolkata port...(If CIF...)
  - b. From custom to final destination
  - c. From custom
  
7. Warehousing charges
  - a. At Nepalese border customs.....
  - b) At Indian custom....
  
- 8 Loading and Unloading expenses:
  - a. At Factory and Nepalese custom ...
  - b. At Indian custom...
  
- 9 Clearing expenses:
  - a. At Nepalese custom.....
  - b. At Indian custom.....
  
- 10 Other Expenses :
  - a. Fees of custom agent.....
  - b. Bill of export processing expenses.....
  - c. Others.....

## Annex II: Summery sheet of responses

SN	Questionnaire	Yes	No	Othe rs
1	How many days it takes to dispatch the consignment for export after the arrival at custom premises?			1.6*
2	Are there separate facilities for export at custom point?	7 (23)	23 (77)	
3	Are customs procedures simple and facilitating to export?	18 (60)	12 (40)	
4.	Is it easy to manage railway wagon in land route?	20 (67)	10 (33)	
5	Is it easy to manage shipping container for export?	23 (77)	7 (23)	
6	Is there any involvement of female employees in your export business?	21 (70)	9 (30)	
7	How many total employees are engaged in your export business?			457 +
8	How many women employees are involved in your export business?			65+ (14. 22)
9	Are the trucks for carrying export consignment available at proper time?	30 (100)	0	
10	How many days it takes to deliver the consignment at destinations?			46 daya *

\*= Average

+ = Total of 30 respondents.

Figures in parentheses indicates the percentage

### Annex III: Cost information

(Amount USD per container)

Commodity	Place of export	Export Value	1	2	3	Total 1-3	4	5	6	7	8
Vegetable Ghee	Different part of India	8305	41.33		229.33*	270.66	32.66	-	17.33	45	365.65
"	Tibet China	11040	232.25		141.0*	373.25	11.4	-	23.0	58	465.65
Carpet / Garment	USA and Europe	60129	181.13	569.54	1430.88**	2181.55	193.42	68.0	338.54	258.34	3039.85

Source: Field Survey, 2009

Note

1= Freight cost up to border point

2= Border point to Kolkata port

3=\* indicates the cost from border point to destination

3=\*\* indicates the cost from Kolkata port to destination

4= loading /unloading charges

5= Warehousing charges

6= Clearing cost (At custom and transit port)

7= Miscellaneous charges (Handling fees, bill clearing fees, agent and forwarders fees etc.)

8= Total Logistic cost

### Annex IV: Route Permit Fee Structure for each four months

Distance	Fees (in rupees)
0-50	420
51-100	470
101-150	620
151-200	690
201-250	810
251-300	870
301-350	990
351-400	1060
401-450	1150
451-500	1250
501-550	1340
551-600	1440
601-650	1530
651-700	1620
701 and above	1750

Source: Department of Transport Management