2 ASSESSMENT OF CURRENT SITUATION

2.1 Physical Characteristics

Bangladesh Railway (BR) has a total of 2,884.67 route-km railway consists of three different gauges. The MG (1000mm) and BG (1676mm) system has seen in the country since the beginning but Dual Gauge (DG) – a mix of MG and BG system in Bangladesh has been introduced since 2001. In 1970, the length of operated railway route-km was 2,858, but it was reduced to 2,656 km in 2006. In Bangladesh era, a total of 138.89route-km railway has been added as a new route, of which 103.70 km is DG and 35.19 km is MG line. On the other hand, a total of 228.74 route-km rail lines have also been closed during the Bangladesh era (Table 2.2).

The construction of Bangabandhu Multipurpose Bridge (BMB) over the river Jamuna incorporating railway lines, opened great opportunities for east-west connectivity, which were earlier, linked by rail ferry services only. In addition, the bridge unlocks the potentials of BG and MG lines in the country. In respect of Dhaka-Chittagong corridor, the existing network is circuitous in nature. Railway density in the southern part is very low and Barisal Division is not connected by rail system.

Administratively, BR maintains two zones, the East Zone (EZ) and the West Zone (WZ). The total route length under EZ is 1390.78 km. Out of entire EZ network, only 119.45 km railway line of Dhaka-Chittagong route is double track, 124.80 km is being doubled, and BR has recently extended DG system from Joydevpur to Dhaka. It is to be observed that the EZ is more dominated by MG line.

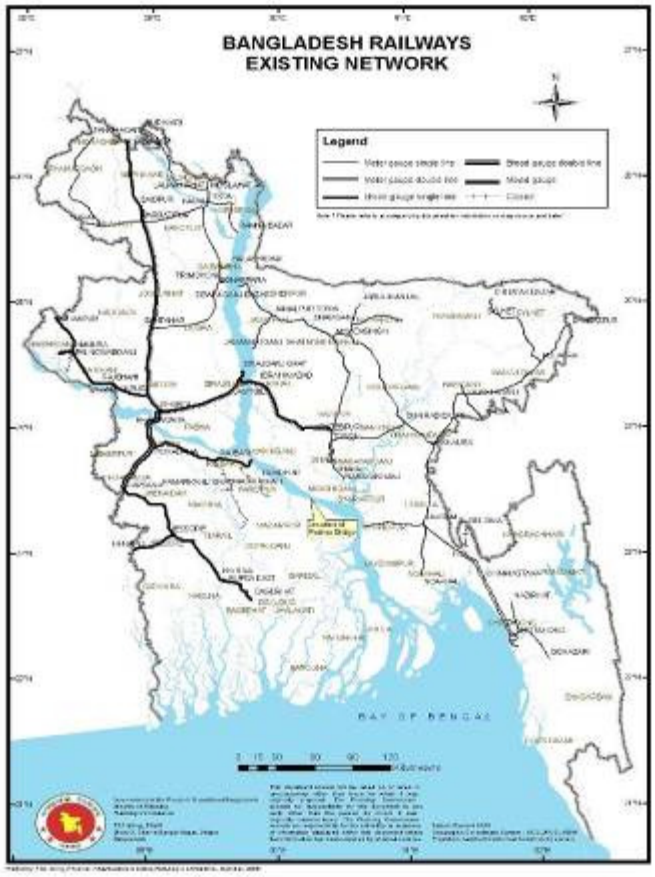


Figure 2-1 : Bangladesh Railway Network Map

The WZ also consists of MG and BG lines. This zone is, however, dominated by BG line and DG lines. There is only 96.01 km double track BG line in the zone. Unfortunately, the Mongla Port is not yet connected directly by railway. The details of railway route networks of BR are shown in Table 2-1 and Table 2-2.

Table 2-1 : Bangladesh Railway Routes Network in kilometre

Item	East Zone			West Zone			
	Metre Gauge	Dual Gauge	Total	Metre Gauge	Broad Gauge	Dual Gauge	Total
Route under operation	1283.04	83.60	1366.64	501.64	507.10	280.55	1289.29
Closure of route	24.14	-	24.14	29.51	175.09	-	204.60
Total route	1307.18	83.60	1390.78	531.15	682.19	280.55	1493.89

Source: BR Working Time Table No. 39
GIS Database, TSMR, TSC Wing, Planning Commission

Table 2-2 : Railway Routes Network by Gauge in kilometre

Item	Metre Gauge	Broad Gauge	Dual Gauge	Total
Route under operation	1,784.68	507.10	364.15	2,655.93
Closure of route	53.65	175.09	0	228.74
Total route	1,838.33	682.19	364.15	2,884.67

Source: BR Working Time Table No. 39
GIS Database, TSMR, TSC Wing, Planning Commission

2.2 Compatibility of Standards with Neighbouring Countries

Geographically, Bangladesh is surrounded almost entirely by India except a small portion on the South-Eastern part where Myanmar is the next door neighbour. The Southern corridor of the Trans- Asian Railway (TAR) from the East passes through Myanmar, India, Bangladesh and again India and then Pakistan, Iran and Turkey before it joins the European Railway. Three different gauges are involved in the corridor such as Metre gauge (MG), Standard gauge (SG) and Broad gauge (BG). The entire South- East Asia is having MG Railway from Viet Nam or Singapore, all the way up to India border point with Myanmar at Tamu. Bangladesh has mostly MG on the Eastern side of Jamuna River and BG on the Western side. Indian Railway mostly has BG, and the existing MG sections are being converted to BG. Pakistan Railway has mostly BG. The Railways of the countries beyond the Indian sub-continent and Southeast Asia, such as China on the East and Iran on the West, Turkey and beyond, all have Standard gauge (SG).

Bangladesh Railway (BR) has a physical rail connection with India and through India to both Pakistan and Nepal on the western side. Currently, a passenger service operates between Bangladesh and India. Bangladesh has the possibility of having a rail link with Myanmar on the eastern side, once the Indian railway link from Jiribum to Tupul (short of Imphal) is completed and this link is further extended up to Tamu at the India/Myanmar border. There is, however, a missing link in Myanmar between Kalay-Tamu (135 km) for which a feasibility study was undertaken by RITES of India in March, 2005. The issue is now under consideration of the Government of Myanmar.

As indicated earlier, the TAR network in entire South –East Asia is Metre-gauge (MG), and there is no plan for their conversion, except a small section between China and Vietnam. The MG network in India has almost been converted to Broad Gauge (BG). As such to facilitate direct movement between Bangladesh and North-Eastern part of India, as well as with Pakistan and Nepal, the relevant regional routes need to be compatible as regards railway track gauge, structure gauge and axle load standards.

2.2.1 Rationalization of track gauge

As regards railway track gauge, there is no problem for through movement from the western side up to Dhaka. But if Bangladesh transport facilities are opened to regional traffic movement, and India allows the land locked countries such as Nepal and Bhutan to use Bangladesh transport facilities and sea ports, certain transport infrastructure facilities in Bangladesh would need to be streamlined for the purpose. In this context, it is highly important to keep in view this issue in their policies of all political Governments in Bangladesh. In the policy, special emphasis must be laid to open up road and rail links with the neighbouring countries through the Asian Highway (AH) and the Trans-Asian Railway (TAR), as well as to go for construction of a Deep Sea Port besides opening up both Chittagong and Mongla Ports to regional traffic.

Depending on the demand for movement of traffic from NE India, Nepal and Bhutan to Bangladesh Ports of Chittagong and Mongla, rail, road and port facilities would need to be streamlined, upgraded and expanded. In addition, there would be a huge demand for movement of Indian traffic between Kolkata and NE India/Agartala, to move across Bangladesh, as it would provide them huge savings in terms of transport costs.

To accommodate the new traffic demands indicated above, in terms of track gauge, the following two major links of Bangladesh Railway (BR) need to be made dual gauge (DG), together with double tracking along certain sections:

- Tongi-Akhaura-Laksam-Chittagong, and
- Tongi-Akhaura-Kulaura-Shahbazpur/Mohisasan(India)

2.2.2 Conformity in respect of Axle Load Standards

An UN-ESCAP study on the Southern Corridor of the Trans Asian Railway (TAR) revealed that the Axle load limits vary widely among the countries along the corridor. While the axle load limit on BG in Bangladesh is 22.50 tons, in India it is 22.82 tons, and in Pakistan it varies between 17.27 and 22.86 tons. India has, however, gone for up gradation of axle load limit initially to 25 tones (with a provision to upgrade the limit to 30 tons in future), along certain dedicated freight corridors between Mombai-Kolkata-Chennai-Basco-Lodhiana, but none of them are proposed to link with Bangladesh.

Since majority of the traffic that is likely to move between India, Nepal, Pakistan, and Bangladesh and beyond are not likely to be heavy raw materials, but finished products, and therefore, the existing axle load of 22.50 tons has no limitation to carry the principal commodities by BR. However, BR may consider an axle load of up to 30 tons on the new Padma Bridge so as not to limit any long term increase in axle load beyond the life of this plan.

2.2.3 Conformity in respect of Structural Dimensions

The high-cube container (40'x 8'x 9'-6") is the largest container which is currently carried by railways in the region. However in certain parts of ESCAP region, super high cube containers (45'-53' x 8'-6" x 9'-6") are also being used in increasing numbers. As such it was necessary

to check the constraints which must be satisfied by the design of the future container wagons and the dimensions of the structures throughout the TAR network. The structures, such as tunnels, through truss bridges, must be sufficiently wide and high to provide adequate clearance for super high cube containers loaded on conventional container wagons(with a typical height of 1.1 meters above the rails) to pass at normal speed.

The use of low profile wagons (i.e. wagons with wheels of small diameter or with dropped centre sections) can sometimes be used to overcome structure constraints without the need to expand the inside dimensions of structures at often prohibitive costs.

A review of the existing situation with regard to the structure dimension standards in BR, whether these conform to the above requirements, it revealed that throughout the BG system in Bangladesh, there are no restrictions imposed on the carrying of containers of any size when loaded on flat wagons of standard height(1.1 meters). The only restriction is on a MG section at the Kalurghat Karnafully Bridge, which is proposed to be rebuilt as part of rehabilitation of Chittagong – Cox's Bazar MG line, depending on the priority of developing the Deep Sea port near Sonadia Island.

2.2.4 Compatibility regarding braking and coupling system

While Indian Railway (IR) has already introduced air- brake in their trains, Bangladesh is yet to replace fully their vacuum brakes with air brakes. Pakistan is also more or less in a similar position. But both these countries have attached high priority to go for air brakes within a short time.

Regarding coupling system, till recently, there was a difference between the couplings used in India and those used in Bangladesh. But this problem has now been overcome.

2.3 Traffic

The following sections describe the passenger and freight traffic scenarios of BR. The information on passenger traffic includes number of passengers by class of trains, passenger-km, passenger train-km, and occupancy of intercity trains. The information on fright traffic indicates principal commodities carried and its trend, container services and its trend, and their lead distances.

2.3.1 Passengers

As recorded in BR's Information Book 2005, during the last 35 years, the number of passengers carried by BR decreased by 42%, although population of the country has doubled. However, during the period, passenger-kilometres increased by 25.5% (0.73% per annum). This is due to significant change in the travel pattern.

Table 2-3: Passenger Traffic by Zone, 1970-2005

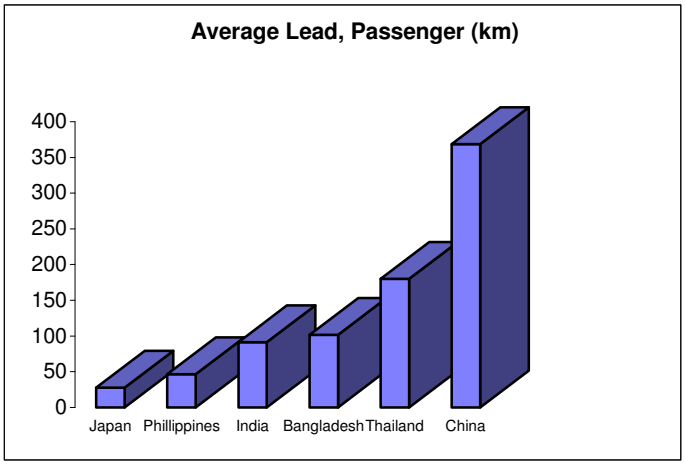
FY	Number of passengers (000)			Passenger kilometres (000)			Average passenger kilometres		
	East Zone	West Zone	Total System	East Zone	West Zone	Total System	East Zone	West Zone	Total System
1970			72885			3316993			45.5
1995	22520	17679	39646	2914575	1122633	4037208	129.4	63.5	101.8
1996	19630	13354	32710	2497140	836105	3333245	127.2	62.6	101.9

FY	Number of passengers (000)			Passenger kilometres (000)			Average passenger kilometres		
	East Zone	West Zone	Total System	East Zone	West Zone	Total System	East Zone	West Zone	Total System
1997	21625	16126	37494	2752172	1001437	3753609	127.1	62.1	100.1
1998	23124	15236	38300	2947631	907868	3855499	127.5	59.6	100.7
1999	24873	11427	36239	2957344	720918	3678262	118.9	63.1	101.5
2000	26482	12233	38634	3075618	865070	3940688	116.1	70.7	102.0
2001	28551	12715	41212	3306478	902708	4209186	115.8	71.0	102.1
2002	27087	11694	38716	3142109	829733	3971842	116.0	71.0	102.6
2003	26910	12477	39162	3196908	827298	4024206	118.8	66.3	102.8
2004	28962	14758	43435	3321045	1020425	4341470	114.7	69.1	100.0
2005	26925	15628	42254	3083613	1080520	4164133	114.5	69.1	98.6

Source: Information Yearbook 2005, Bangladesh Railway

Average Distance Travelled

The average distance travelled by a passenger increased from less than 46 km (in 1970) to more than 99 km (in 2005). This is mainly because more passengers are now using long haul Inter City (IC) trains. The bar chart shows how Bangladesh compares with other countries regarding average lead of passenger traffic. It indicates that average length of passenger journey in Japan is about 24 km only, while, the average length of the journey is around 350km in China and more than 150 km in Thailand. The average length of passenger of Bangladesh is about the same, as that of India.



Source: World Bank's Railways Database

The following Table 2-4 shows the number of passenger and average lead of passenger by train classes. Passenger km of Bangladesh Railway has been steadily increasing since 1996-97 at the rate of 1.5%. The average trip length of train per passenger shows an almost constant trend, which reached 115 km in the East Zone. Passengers by train classes show that the travellers use the second-class coaches widely.

Table 2-4: Number of Passengers and average Trip Length (2004-05)

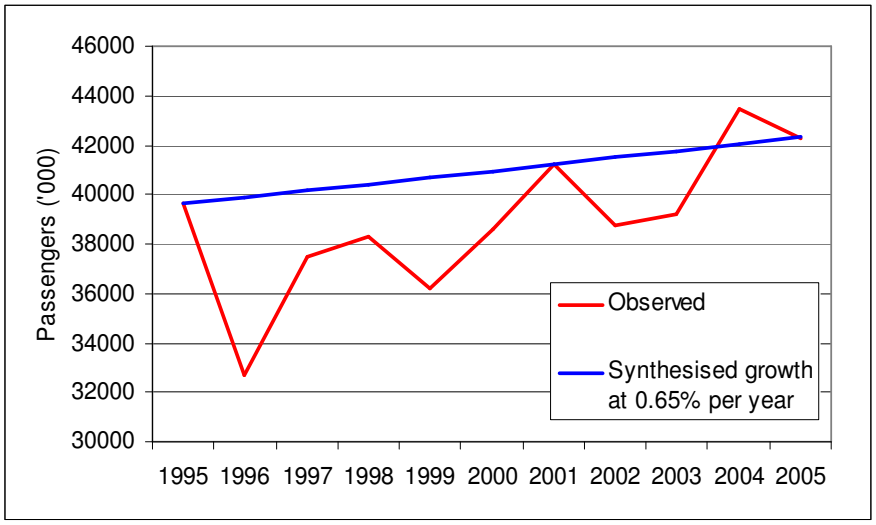
Passengers by Train Classes	Number of Passengers ('000)		Average Passenger-km (pass-km)	
	East Zone	West Zone	East Zone	West Zone
Intercity – Air Condition	13	1	283	380
Intercity – First Class	402	15	270	229
Intercity – Shovan Class	7,475	2,094	225	211
Intercity – Shulov Class	3,310	3,004	115	107
Mail and Express 2nd Class	10,722	5,958	70	33
Local Train – 2nd Class	4,980	4,554	33	26
Total/Average	26,902	15,626	115	69

Source: Information Yearbook 2005, Bangladesh Railway

Growth in Traffic

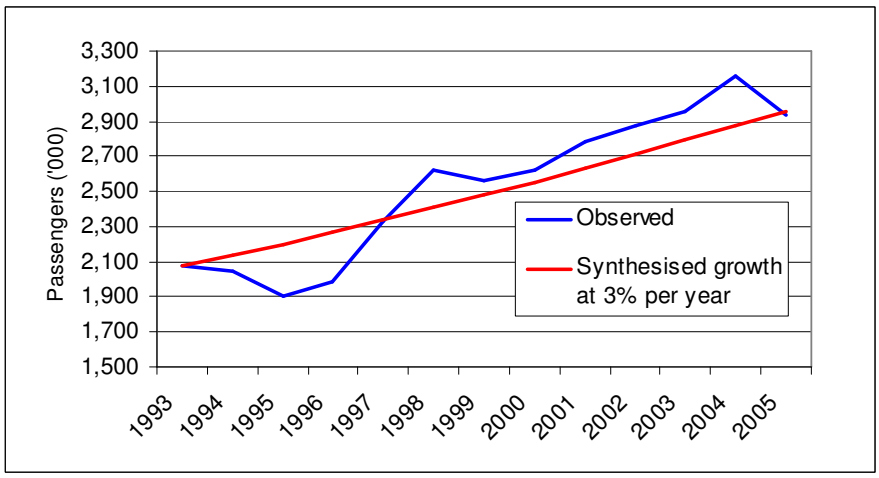
Analysis further revealed that overall passenger traffic in BR has grown only very slightly over the last 10 years (an average of 0.65% per year). Again the change has been erratic, as shown in Figure 2-2 is fluctuating quite a bit from year to year.

Figure 2-2: Overall Passenger Growth, 1995 to 2005



The growth has been slow mostly because of the decline in local and branch line passengers over the last ten years. But compared to this, the Inter-City passenger traffic has grown at 3% per year, as shown in Figure 2-3. The loss of passenger traffic along branch lines has been partly due to reduced railway services and closure of many branch lines as well as stiff competition from road transport over short distances, where frequent bus services are available now.

Figure 2-3: Growth in Inter-City Passengers, 1995 to 2005



Correction in Information Book

The Draft Final Report, 2003 of Bangladesh Regional Rail Traffic Enhancement Project, however, found that there has been a significant undercounting of the passenger traffic volume in BR's Information Books. This is due to the fact that the passengers travelling in non-

air conditioned trains which are on 'commercial lease' to private entrepreneurs are not accounted for in the Information Books. This has been analysed and passenger-km of non-air conditioned trains has been adjusted in proportion to revenue. The analysis shows that for the non-air conditioned trains, the total passenger-km in 2004-05 was 1,872 million, as opposed to 1,225 million shown in BR's Information Book 2005 – a 35% under-counting. This has also affected the total pass-km number, being reduced by 13.5%, from 4,811 to 4,164. The adjusted Table 2-5 reproduced below has been used for further analysis.

Table 2-5: Total passenger-km and share of Inter City trains [adjusted for leased out trains

Financial Year	Passenger-km (million)				Pass-km Index		
	Total	Inter City	Others	% Inter City	Total	Inter City	Others
1993	5,112	2,076	3,036	40.6	153	104	226
1994	4,570	2,043	2,527	44.7	137	103	188
1995	4,037	1,900	2,137	47.1	121	95	159
1996	3,333	1,990	1,343	59.7	**100**	**100**	**100**
1997	3,754	2,330	1,424	62.1	113	117	106
1998	4,064	2,619	1,445	64.4	122	132	108
1999	4,095	2,565	1,530	62.6	123	129	114
2000	4,192	2,620	1,572	62.5	126	132	117
2001	4,516	2,788	1,728	61.7	136	140	129
2002	4,521	2,877	1,644	63.6	136	145	122
2003	4,556	2,955	1,601	64.9	137	148	119
2004	4,947	3,155	1,792	63.8	148	159	133
2005	4,811	2,939	1,872	61.1	144	148	139

The numbers for Financial Year 1996 have been used as base index (100) for showing percentage changes.

Train Occupancy

The Table 2-6 describes the occupancy of intercity trains. Occupancy rate means an average number of passengers in a train, and this has been fluctuating within a range of 80% to 90%. Occupancy rates have been varying widely between train types. In case of conventional trains, the occupancy was on an average 35%, while it was higher in faster trains.

Table 2-6: Occupancy (%) of all Classes of Intercity Trains

Year	Type of Gauges			Total System
	Broad Gauge	Metre Gauge (EZ)	Metre Gauge (WZ)	
2002	55.3	102.3	62.4	87.3
2003	55.9	108.2	47.8	90.1
2004	61.90	97.80	51.90	85.40
2005	73.91	87.80	49.34	79.57
2006	69.22	97.87	40.04	84.45

Source: Information Yearbooks, Bangladesh Railway

Punctuality of Trains

Punctuality, train delays and cancellation are the three main issues of great concern to train users. All these three aspects of service are related to on-train running. The average punctuality rate over the entire system and all train type is about 60%, which is a matter of

great concern to train users of Bangladesh Railway. The Table 2-7 shows the punctuality of trains in Bangladesh by train types and gauges.

Table 2-7: Punctuality of Passenger Trains

Year	Broad Gauge			Metre Gauge		
	Intercity Trains	Mail/Express Trains	Local Trains	Intercity Trains	Mail/Express Trains	Local Trains
1970	-	90.5	90.1	-	72.4	79.0
2000	67.9	34.2	53.0	79.8	71.1	64.1
2005	61.4	44.3	31.7	69.8	60.5	57.2
2006	78.9	48.8	38.0	62.8	50.7	58.9

Source: Information Yearbooks, Bangladesh Railway

It is worth mentioning here that the slow speed of train (32 km per hour) is another weakness of the rail services. It was found from various studies that the track conditions in the branch lines are in deplorable condition and cancellation of train service is a usual matter there. Therefore, increasing punctuality, improved maintenance of coaches, increase of speed, development of timetable, passenger information, and customer services are some of the main concern, which this Railway Master Plan is going to address.

2.3.2 Freight

The rail sector has been losing freight market share for many years due to a variety of problems, which are related to poor management, low investment and lack of maintenance of infrastructure; leading to poor service to customers. Rail share of transport has fallen from 30% to 7% over the last 30 years, but with the exception of container traffic, which is increasing at around 9.2% per year. Bangladesh Railway lost freight traffic volume by about 35% from about 49 million tonnes in 1970 to about 32 million tonnes in 2005. Freight tonne-kilometres also decreased by the same percentage. The average lead distance remained more or less static at around 260 km over the period. However, the lead distance varied widely between the two zones, 296 km in the East and 177 km in the West in 2005 compared to 296 km and 190 km respectively in 1970. Please see Table 2-8, for further details.

Freight traffic volume in East Zone has remained almost the same (below 1.7 million tonnes per year) since 1995 but traffic has become more containerised. While non-containerised freight traffic in East Zone has declined, container traffic has increased by 13% per year (see figure 2-5). On the other hand, traffic increased by around 64% in the West Zone in 2005, growing at an average of 5% per year (see figure 2-4). However, average lead distance in the East Zone has been significantly high, about 300 km compared to about 180 km in the West Zone. It was mostly because the East Zone traffic is dominated by relatively longer haul traffic like containers transported between Dhaka and Chittagong Port, petroleum products from Chittagong to northeast and northwest parts of the country. On the other hand, most of the West Zone traffic consists of goods imported from India. Thus traffic enters Bangladesh via Darsana, Benapol and Rohanpur, and is carried mostly to nearby Noapara, Ullapara, Sirajganj stations in the West Zone, which are within short distances from the border.

Table 2-8: Railway Freight Traffic and Lead Distance of Freight by Zone

Year	Freight tonnes ('000)			Tonne- kilometres ('000)			Average haul distance (km)		
	East Zone	West Zone	Total System	East Zone	West Zone	Total System	East Zone	West Zone	Total System
1970			4878			1265063			259.3
1995	1649	1424	2729	488377	271401	759778	296.2	190.5	278.5
1996	1485	1367	2551	442484	246539	689023	298.0	180.4	270.1
1997	1698	1652	2936	499615	282814	782429	294.2	171.2	266.5
1998	1718	1657	3038	505021	298828	803849	294.0	180.3	264.5
1999	1839	2007	3418	545291	351106	896397	296.4	175.0	262.2
2000	1573	1725	2889	467362	309799	777161	297.2	177.6	269.0
2001	1691	2305	3465	500461	407416	907877	296.0	176.8	262.0
2002	1630	2615	3667	485862	465959	951821	298.1	178.1	259.6
2003	1678	2549	3666	499792	452195	951987	297.8	177.4	259.7
2004	1699	2184	3473	504519	390980	895499	297.0	179.0	257.9
2005	1357	2340	3206	401646	415172	816818	295.9	176.7	254.7

Source: Information Books, Bangladesh Railway

Figure 2-4: West Zone Freight Traffic, 1995 to 2005

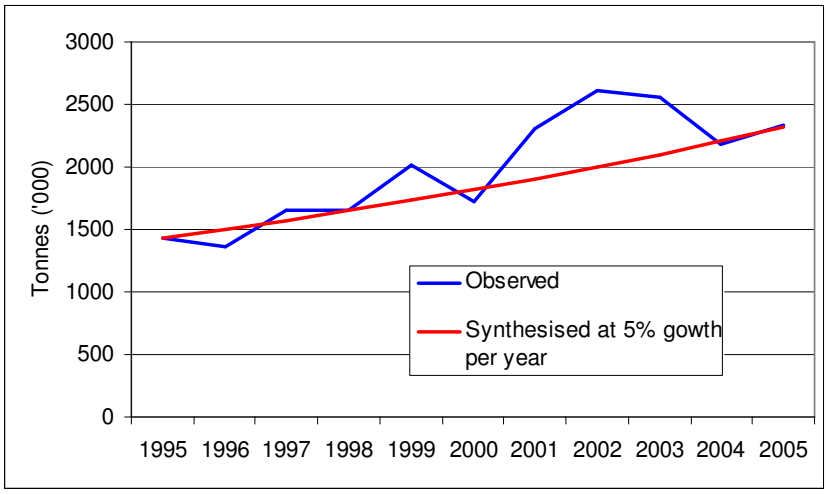
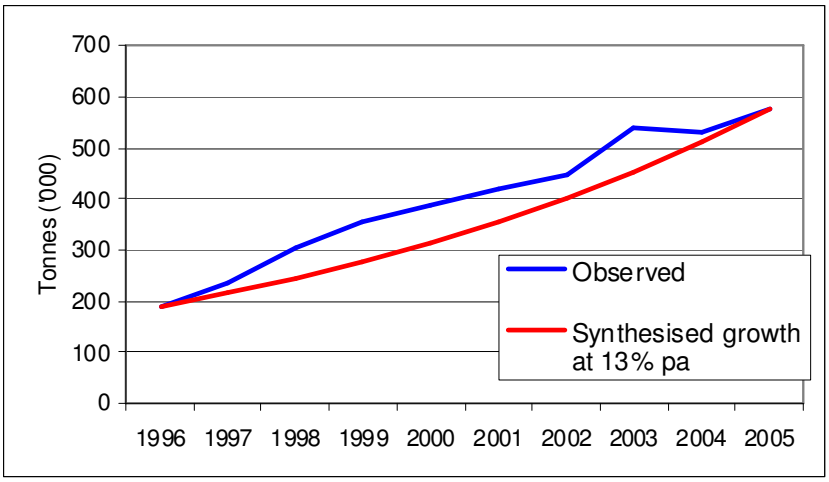
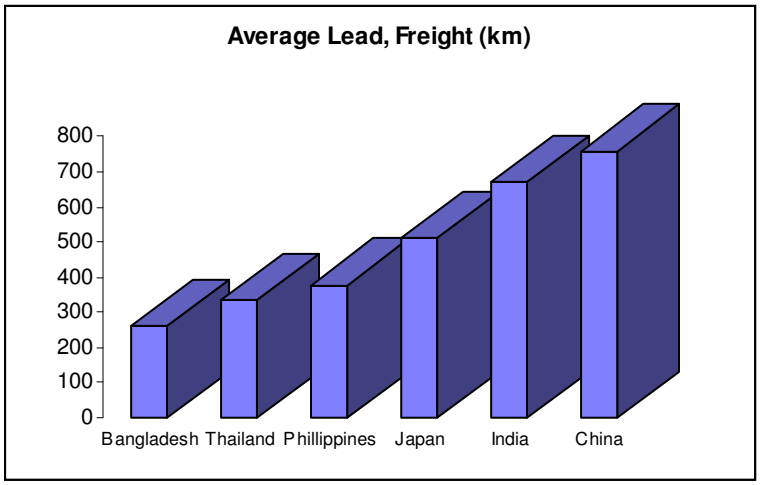


Figure 2-5: Container Freight Traffic, 1995 to 2005



It can be observed in the following bar chart that the average lead of freight in Bangladesh is comparatively lower than selected countries. However, lead distance depends on size of a country, location of production and consumption centres and regional connectivity of railway. It may be noted that in carrying larger volume of freight, rail has clear economic advantages. However, production and consumption chain has natural markets for rail and road haulage. Rail has natural market on production, depending on following characteristics, such as high volume, large shipments, regular destination and large inventories. Railway used to be the principal mode of land transport and was entrusted with the responsibility of transporting goods of all descriptions see Table 2-9. With gradual emergence of road transport, it started becoming clear what commodities the railway is ideally suited to carry.



Source: World Bank's Railways Database

Table 2-9: Principal commodities (traditional) and volumes carried ('000 tonnes)

Year	Cement	Coal	Fertilizer	Raw Jute	POL	Marble, stone	Rice, paddy	Wheat	Sugar cane	Containers	Principal commodities		All commodities
											Total	% of all	
1970	292	138	213	664	368	139	531	623	246	0	3,214	66	4,878
1975	103	55	191	338	116	111	204	494	248	0	1,860	55	3,387
1980	119	110	335	263	190	64	372	626	250	0	2,329	74	3,131
1985	137	32	496	210	90	81	349	649	182	0	2,226	74	3,009
1990	132	99	408	113	120	79	206	471	285	83	1,996	83	2,410
1995	366	79	652	103	135	181	271	416	75	133	2,411	88	2,729
1996	234	36	512	67	144	308	289	456	36	164	2,246	88	2,551
1997	367	34	306	70	197	402	339	296	37	192	2,240	76	2,936
1998	794	7	326	105	179	130	363	320	38	236	2,498	82	3,038
1999	349	2	251	50	193	126	924	594	41	304	2,834	83	3,418
2000	639	1	177	55	232	107	326	384	37	355	2,313	80	2,889
2001	342	5	187	29	279	206	347	578	26	388	2,387	69	3,465
2002	14	3	164	31	310	325	379	890	38	420	2,574	70	3,667
2003	0	0	142	20	313	188	480	910	40	448	2,541	69	3,666
2004	0	0	110	13	321	146	376	792	27	542	2,327	67	3,473
2005	0	0	194	2	554	198	442	749	24	530	2,693	84	3,206

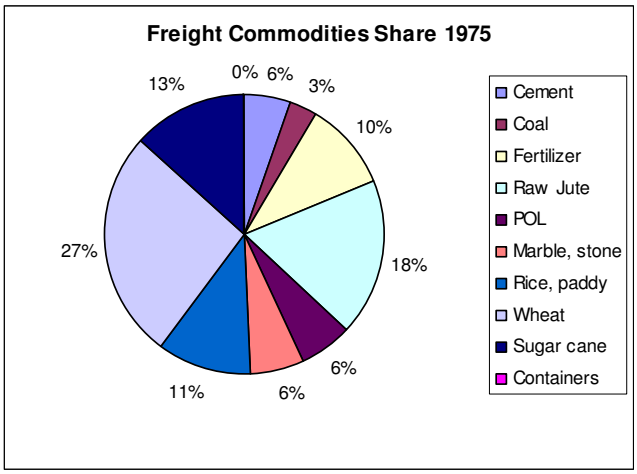
Source: BR's Information Books of different years.

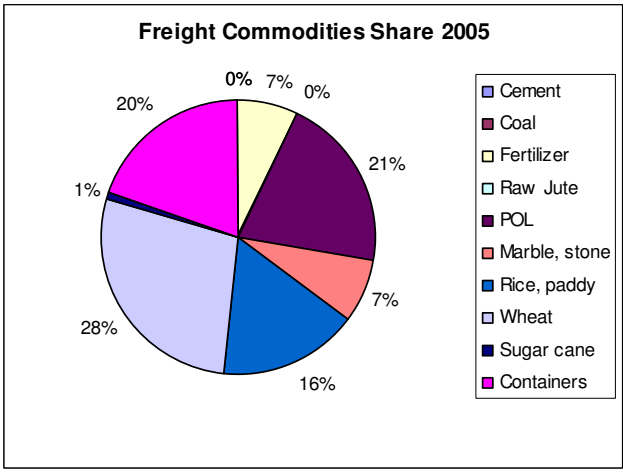
The total freight traffic does not show any particular pattern of growth, excepting that after independence the total traffic carried by Bangladesh Railway sharply dropped from 4.9 million tonnes (in 1970) to 3.4 million tonnes (in 1975). The downward trend continued till 1990

reaching the minimum of 2.4 million tonnes. Then there was an upturn and the volume stabilized around 3.5 million tonnes between 2001 and 2005.

Principal Commodities Carried by Bangladesh Railway

It is, however, interesting to note that four of the ten 'principal commodities' (cement, coal, raw jute and sugar cane) totally disappeared or became insignificant in terms of volume. This overshadowed the steady growth of four commodities, namely, containers, POL, rice/paddy and wheat.





A commodity wise analysis is necessary to make a reasonable forecast of freight traffic for Bangladesh Railway. The principal commodities now transported by BR are segregated and shown in the Table 2-10 below.

Table 2-10: Principal commodities carried by BR ('000 tonnes)

Year	Fertilizer	POL	Marble & stone	Food Grain	Containers	Other Commodities	All Commodities
1995	652	135	181	687	133	941	2,729
1996	512	144	308	745	164	678	2,551
1997	306	197	402	635	192	1,204	2,936
1998	326	179	130	683	236	1,484	3,038
1999	251	193	126	1,518	304	1,026	3,418
2000	177	232	107	710	355	1,308	2,889
2001	187	279	206	925	388	1,480	3,465
2002	164	310	325	1,269	420	1,179	3,667
2003	142	313	188	1,390	448	1,185	3,666
2004	110	321	146	1,168	542	1,186	3,473
2005	194	554	198	1,191	530	539	3,206
Annual growth trend	- 11.4%	10%	0.7%	5.65%	14.8%	- 5.58%	1.63%

In this table, rice/paddy and wheat are shown together under the heading 'food grain'. Of the five principal commodities two items containers and petroleum products (POL) show a steady growth trend. Abrupt growth of food grain traffic in 1999 was due to high volume of import following the severe crop damage in 1998 as a result of devastating floods. Fertilizer traffic

declined steadily till it stabilised since year 2000. This decline was not due to dearth of traffic but due to failure of BR to supply sufficient wagons in time. Stone traffic does not show any growth trend, but there are occasional increases due to increase in consumption during implementation of large civil engineering projects.

Limitations of BR's Rolling Stocks

Bangladesh Railway wagons carry a maximum load of 40 tonnes, and trains can operate with no more that 30 bogie wagons. On the bright side, 47 percent of all locomotives in Bangladesh are less than 15 years old, and there are plans to modernise the railway. Average freight train speed is however about 23 km/hour, which is very low in comparison with other Asian countries. Apart from this, a significant proportion of the wagon fleets are characterised by plain bearings, rather primitive suspension, two axle rigid wheelbase, low payloads, etc. In Bangladesh freight traffic is still handled manually in the traditional manner. However, Bangladesh Railway is trying to increase payloads, performance and reliability from its wagons.

2.4 Legal and Regulatory Framework

Bangladesh Railway has established Code and Manual for each type of work, namely construction, maintenance, installation, procurement of asset and maintenance of accounts and finance. The primary rules for All Open Lines of Bangladesh together with the Subsidiary Rules, are known as General and Subsidiary Rules for information and guidance of the staff. The primary legislation of railway is Railway Act, 1980. However, the guiding rules of Bangladesh Railway are General Rules, 1929 (A.-B.), 1930 (E.B.), 1963 (P.E.) and the, General Rules for All Open Lines of Bangladesh Railway are Administered by the Government (Part I, II and III) together with the Subsidiary Rules, 1981.