RE-ORIENTATION OF BANGLADESH RAILWAY: A MARKET INTEGRATION STUDY

BY

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A Thesis submitted to the Department of Marketing, Evening MBA Program, Faculty of Business Studies, University of Dhaka, in partial fulfillment of the requirement of Internship Program for the degree

Of

MASTER OF BUSINESS ADMINISTRATION

August 10, 2005

DECLARATION

I hereby certify that the research work reported in this project paper has been performed by me and this work has not been submitted elsewhere for any other purposes except for publication and thesis.

_____

August 10, 2005 Md. Saidur Rahman

PREFACE

This Project Paper has been prepared on **"Re-orientation of Bangladesh Railway: A Market Integration Study "** for the partial fulfillment of the Internship program of Master of Business Administration (MBA) degree. The purpose behind this report writing is to make the students knowledgeable and capable in writing a project paper individually. As I am serving Bangladesh Railway as an Assistant Executive Engineer, I feel free to choose an exceptional but important topic on Bangladesh Railway as project paper for my Internship. While preparing this report, I have to study my organization as well as transportation sector of Bangladesh thoroughly and thus received practical knowledge about the present situation of Bangladesh Railway and country's transport sector. The specific objective of this study is to identify & analyze various problems & prospects and marketing issues of Bangladesh Railway and to provide a set of recommendations to make railway as a profitable market-led commercial organization of the Government.

I feel very much proud having a chance of writing a report on such exciting and important topic. While preparing this report, I have to study some selected writings on Transportation system & Infrastructure policies of Bangladesh & other countries and also have to search the web and thus received important information on the subject.

This report has been prepared with utmost sincerity. But due to time constraint, there might be some lacking. As all the information of this paper is based on secondary data, there is very much possible that some details could not be included. Hope these minor omissions would be overlooked.

I take the opportunity to thank our teacher, **Professor M A Quddus**, Department of Marketing, Faculty of Business Studies, University of Dhaka, to give me such a unique opportunity to prepare a project paper on such excellent topic, which will be very helpful and knowledgeable to me throughout my career. I am grateful to him for guidance in preparation of this report. I also thank all my friends and family members for their constant support in writing the report.

Thank you.

Md. Saidur Rahman Date: August 10, 2005

ACKNOWLEDGMENT

I express my deepest sense of gratitude to the respected supervisor, **Professor M A Quddus**, Department of Marketing, Faculty of Business Studies, University of Dhaka, who assigned me to prepare this report. His valuable suggestions and important guidelines on report preparation helped me a lot in preparing this report. His valuable instructions, constant inspiration, enormous patience and affectionate guidance contribute to my academic experience throughout the course work.

My special thanks to them who helped me providing information directly or indirectly, especially to Additional Director General/Infrastructure, General Manager/Project and Additional Chief Engineer/Bridge of Bangladesh Railway. I humbly render my sincere gratitude to all teachers and staffs of the Department of Marketing to help me directly and indirectly and also my friends for their cooperation.

I also extend my indebtedness to my parents and family members.

Finally, I would like to offer my thanks to Mr. Foyez Ahmed and other staffs of the Department of Marketing of Dhaka University for providing various facilities and support.

August 10, 2005

Professor M A Quddus
Department of Marketing
Faculty of Business Studies
University of Dhaka

Subject: Letter of forwarding

Dear Sir,

Most respectfully to state that I am a student of evening MBA Program [1st Batch], Department of Marketing, Faculty of Business Studies, University of Dhaka, beg to lay the following facts before your kind honor for favor of consideration and sympathetic action.

I am happy to submit my Internship Project Paper on **"Re-orientation of Bangladesh Railway: A Market Integration Study "**. I employed all possible efforts to represent it as a phenomenal presentation.

Therefore, I took this report with a good grace and would be available at any time for interpretation of ins and outs of the report.

I am pleased to publish this report and hope that you would find it interesting and useful.

Thank you.

Sincerely yours,

Md. Saidur Rahman
ID #: 40201045

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LIST OF ABBREVIATIONS

AC	Air-conditioned
ADB	Asian Development Bank
ALTID	Asian Land Transport Infrastructure Development
BCS	Bangladesh Civil Service
BG	Broad gauge
BOO	Build, Operate & Own
BOT	Build, Operate & Transfer
BITS	Bangladesh Integrated Transport System Study
BTSS	Bangladesh Transport Sector Study
BIWTA	Bangladesh Inland Water Transport Authority
BR	Bangladesh Railway
BRA	Bangladesh Railway Authority
BRCE	Bangladesh Railway Corporate Entity
BRTA	Bangladesh Road Transport Authority
CONCOR	Container Corporation
CSO	Community Service Obligation
DG	Dual Gauge / Director General
EPZ	Export Processing Zone
ESCAP	Economic and Social Commission for Asia and the Pacific
GDP	Gross Domestic Product
GIS	Geographic Information System
GM	General Manager
GOB	Government of Bangladesh
ICD	Inland Container Depot
ITS	International Transport Study
IWT	Inland Water Transport
JMB	Jamuna Multipurpose Bridge
KM	Kilometer
MG	Meter Gauge
NTRC	National Transport Research Center
PPP	Public-Private Partnership
PSO	Public Service Obligation
RNB	Railway Nirapatta Bahini
SAARC	Southeast Asian Association for Regional Cooperation
SBU	Strategic Business Unit
SWOT	Strength, Weakness, Opportunity & Threat
TA	Technical Assistance
TAR	Trans-Asian-Railway
TK.	Taka

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EXECUTIVE SUMMARY

The Bangladesh economy is burdened by major transportation constraints resulting from a combination of factors such as physical (geographical and historical), developmental (low-level investments and maintenance) and institutional-cum-policy framework-related. These lead to lower efficiency, higher transport costs, and more significantly, "transport unreliability", with major adverse consequences for the economy. These are increased marketing risks, quality determination, and resulting lower price for farm products, which reduce producer incentives; failure of delivery schedules in exports affecting competition.

Bangladesh Railway (BR), a principal transportation agency of the country, is a Government-owned and Government-managed unique organization, serving a population of approximately 140 million living in an area of 1,55,598 square kilometers. As railway is a very important mode of inland transport, its healthy growth naturally contributes to the economic development of the country. But BR, at present, has been suffering from various operating bottlenecks. Critical analysis of the efficiency of BR points up the worsening operating ratio over the last decades. It's continuing large deficit and the high level of direct and indirect Government subsidies is probably the single biggest issue forcing Government of Bangladesh in the transport sector.

The history of railway in the present geopolitical boundary of Bangladesh dates back to 15th November 1862,when a Broad Gauge (BG) single line was constructed and opened to traffic between Darsana and Jagoti near Kushtia. In the British India railway system, there was considerable expansion of railway network in this territory under the State and various Companies. The Meter Gauge (MG) network on the eastern side was mainly constructed to connect Chittagong Port with Assam and on the western side the network was Kolkata bound BG running down from the north. These two types of network remained isolated by the river Jamuna since the opening of Jamuna Multipurpose Bridge. But till now, a complete integrated railway system between two zones (East & West) does not exist. Besides, the present rail links of the two zones are not straight; rather they have huge rounding loops in many important sections.

Bangladesh Railway, is made up of truncated portions of the erstwhile East Bengal Railway and Bengal Assam Railway (of the then British-Indian rail system), which after 1971 War of Liberation fell in Bangladesh territory, inherited a number of structural and physical weaknesses as a part of its legacy, since it was not specially designed and constructed to serve Bangladesh. Due to truncation from the main system, BR is handicapped to serve the country effectively and efficaciously without proper re-orientation and development.

Since the liberation of Bangladesh, instead of constructing new rail-routes, some of the branch line railway sections were declared redundant and subsequently closed and no proper attention to maintain the existing asset was being given. Although huge development budget has been allocated for roads & highways sector, a little attention has been given to rail sector. More than 1200 kms rail lines are under risk for operation due to lack of proper maintenance. Besides, one of the major problems presently faced by the BR is a serious shortage of locomotives and route capacity. Thus BR was forced to face the uneven competition with other modes of transport. So it is a challenge for BR to eliminate its inherited structural &

physical weakness and to make it a profit-driven market-oriented commercial organization under public ownership and control.

Now, more than ever before in the long history, Bangladesh Railway is facing major threats to its long term survival: the progressive withdrawal of the government funding which has been necessary in the past to sustain railway infrastructure and services, and the relentless increase in competition from other transport modes, especially from road transport which has been assisted by different factors. The first of these threats, the withdrawal of government funding assistance, must and should be combated by more effective lobbying of governments by railway managements. The second threat, however, can only partly be countered by more effective lobbying. Competition from the road transport cannot be expected to reduce in intensity for the foreseeable future for its greater flexibility, and will only be effectively counteracted if rail can offer a standard of service which at the same time satisfies the needs of customers and is superior to that on offer from its competitors. Clearly this provides rail with a substantial challenge. It will require a major change in the outlook of railway managements and in the culture of railway organization. Henceforth, the activities of railway managements will have to be directed at: identifying, understanding and responding to the needs of their existing and potential customers; identifying and understanding the cost causation and profit potential associated with individual traffics or market segments; and bringing about the organizational change which will ensure that railways will satisfy new commercial goals. These guidelines are intended to assist the railway organization of the country to set up the systems and procedures necessary for BR to be able to function as commercially vibrant, market-led organization. *All* units of the organization must become and remain ***customer aware***, and their activities must be harmonized and coordinated with the satisfaction of customers as the fundamental objective.

Finally, to enhance the efficiency of BR, proper attention will be given to this trust sector. Private sector involvement in operation and maintenance of BR should be encouraged. Government has to patronize the sector properly for its expansion and development. In the same time, operational & maintenance as well as overhead cost should be minimized, management should be efficient, and number of employees should be rationale. So, for the healthy growth and development of Bangladesh Railway, the unique mass transportation system of the country, a proper market-based reorientation is very much necessary.

This study sequentially analyzes different issues of Bangladesh Railway efficiency with an explanation of the specific importance of marketing to railways and suggests ways how to make the railway a profit-driven & market-oriented commercial organization under public ownership & control.

CHAPTER I

INTRODUCTION

1.1 Background

Railway organizations worldwide have traditionally evolved as vertically integrated transport operating enterprises under public ownership and control. To the extent that they have been sheltered from competition by government regulatory controls, they have been able to grow to dominant positions in the domestic transportation activity of many countries, both within and outside of the Asia-Pacific region.

Bangladesh Railway (BR), a total of 2854.96 route kilometers (kms), is made up of truncated portions of the erstwhile East Bengal Railway and Bengal Assam Railway (of the then British-Indian rail system), which after 1971 War of Liberation, fell in Bangladesh territory. In the process, BR inherited a number of structural and physical weaknesses as a part of its legacy, since it was not specially designed and constructed to serve Bangladesh. Due to truncation from the main system, BR is handicapped to serve the country effectively and efficaciously without proper re-orientation and development.

Bangladesh Railway, a principal transportation agency of the country, is a Government-owned and Government-managed unique organization, serving large numbers of population of the country for a long period of time. As railway is a very important mode of inland transport, its healthy growth naturally contributes to the economic development of the country. But BR, at present, has been suffering from various operating bottlenecks. Critical analysis of the efficiency of BR points up the worsening operating ratio over the last decades. It's continuing large deficit and the high level of direct and indirect Government subsidies is probably the single biggest issue forcing Government of Bangladesh in the transport sector.

Bangladesh Railway, at present, is in poor condition and inefficiently managed. Since the partition of India in 1947, there was hardly any expansion of the railway in East Pakistan, while the road network expanded tremendously. As a result of the monopoly, the railway of this area inherited from British India started declining day by day and the railway started loosing its glorious past. Since the birth of Bangladesh in 1971, instead of constructing new railway lines, some of the branch line railway sections were declared redundant and subsequently closed and no proper attention to maintain the existing asset was being given. Thus BR was forced to face the uneven competition with other modes of transport especially with road transport.

However, over the post-Second World War era, and especially over the past two decades, rail dominance of domestic transport in Bangladesh like many other countries of the world has been challenged by the dynamic growth of road networks and of commercial motor vehicle fleets. This growth has been assisted by the often rapid dismantling of government regulatory controls, as well as by the commitment of a major and increasing share of public infrastructure development funds to the development of highway networks, without a commensurate increase in direct road user charges to offset these public outlays.

Now, more than ever before in the long history, Bangladesh Railway is facing two major threats to its long term survival: the progressive withdrawal of the government funding which has been necessary in the past to sustain railway infrastructure and services, and the relentless increase in competition from other transport modes, especially from road transport which has been assisted by the abovementioned factors. The first of these threats, the withdrawal of government funding assistance, must and should be combated by more effective lobbying of governments by railway managements. The second threat, however, can only partly be countered by more effective lobbying.

Public support of road transport at the expense of rail transport development has usually been justified on the basis of the greater flexibility of the road transport mode. Competition from this source cannot therefore be expected to reduce in intensity for the foreseeable future, and will only be effectively counteracted if rail can offer a standard of service which at the same time satisfies the needs of customers and is superior to that on offer from its competitors. Clearly this provides rail with a substantial challenge. It will require a major change in the outlook of railway managements and in the culture of railway organization. Henceforth, the activities of railway managements will have to be directed at: identifying, understanding and responding to the needs of their existing and potential customers; identifying and understanding the cost causation and profit potential associated with individual traffics or market segments; and bringing about the organizational change which will ensure that railways will satisfy new commercial goals.

These guidelines are intended to assist the railway organization of the country to set up the systems and procedures necessary for BR to be able to function as commercially vibrant, market-led organization. However, the mere setting up of systems and procedures will not of itself ensure success. Success will only follow if the right attitudes are developed and promoted throughout the organization, starting at the very top with the Chief Executive and extending down to the lowest operative staff levels. *All* units of the organization must become and remain ***customer aware***, and their activities must be harmonized and coordinated with the satisfaction of customers as the fundamental objective.

1.2 Objectives of the Study

The specific objective of this study is to address various marketing issues of Bangladesh Railway. The broad objectives are to analyze the necessity of the reorientation of Bangladesh Railway to make it a market-led organization with particular emphasis on:

- Explaining of the specific importance of marketing in railways with an appraisal of the place of marketing in the railway organization and of the relationship of marketing to railway corporate planning processes and specifications for the railway marketing plan, railway marketing management organization and functions;

- Impacts of traffic growth and transport use on long term transport policies;

- Identifying issues of Bangladesh Railway efficiencies especially related to operational problems, reform processes and future prospects;

- Analyzing issues related to reorientation of Bangladesh Railway through physical & structural as well as institutional reform process which is necessary to make BR a profit-driven & market-oriented commercial-cum-public organization

- Evolving transportation strategy and integrated transport policies based on multimodal approach;

- Setting up framework for project appraisal from integrated and multimodal perspective and establishing work-plan for integration of existing infrastructure and coordination of the existing transport organizations for multimodal operation; and

- Identifying legal and regulatory requirements for multimodal integrated transportation system of the country.

1.3 Scope of the Study

The scope of the study is limited to the issues related to the market integration study of Bangladesh Railway in context of other modes of inland transport of the country. The report will focus only on the necessity of the reorientation of Bangladesh Railway with an emphasis of railway marketing for its healthy growth and development. In this context, future traffic growth and modal shares, and issues related to railway efficiency have been briefly discussed from integrated and multimodal transportation perspective.

1.4 Limitations of the Study

Due to time constraints, the study has been conducted only on some specific market integration issues of Bangladesh Railway based on secondary information. A macroscopic analysis (aggregate analysis) has been made here for the unavailability of appropriate data in some cases. The overall transport development issues with particular emphasis on the railway marketing and integrated & multimodal trsansport policies have been briefly discussed only in context of railway transportation. The marketing information system and railway traffic costing concepts & principles related to marketing, detailing of integrated multimodal studies, route survey, cost estimation and future projection are beyond the scope of this study. For more accurate analysis, further detail studies are required.

1.5 Methodology of the Study

1.5.1 Type of Study

The study is mainly a qualitative research, which involves analyzing of some important information of railway transportation and marketing issues especially of Bangladesh Railway in context of other modes of transport and finally suggesting a market integration reorientation of Bangladesh Railway.

1.5.2 Source Of Data

The information used in this report is based on secondary source, which is mainly collected from Bangladesh Railway, Planning Commission, Ministry of Communication, Bangladesh Bureau of Statistics and Internet. Some other statistical data are collected from different published booklets and transport journals.

1.5.3 Layout Of The Report

At the introductory section, an attempt has been made to give an idea on the railway transportation system and on the importance of the study. Then the scope & limitation and the methodology of the study have been discussed briefly. The scenario of Bangladesh transport sector as well as railway transportation of the country has been highlighted in the second chapter, under '*Literature Review'*, with special emphasis on integrated and multimodal transportation system and modal share of traffic growth. The third chapter is on the issues related to Bangladesh railway efficiencies which deals with the performances of Bangladesh railway, problems faced by BR, reform issues and prospects of BR. The data has been tabulated and analyzed in the relevant sections accordingly. The next chapter discusses the railway marketing & marketing mix; an explanation of the specific importance of marketing to railways; an appraisal of the place of marketing in the railway organization and of the relationship of marketing to railway corporate planning processes; specifications for the railway

marketing plan, railway marketing management organization and functions related to marketing. Then policies for Integrated and multimodal transport development and the issues related to preparing the railway for multimodal operations have been suggested in association with conclusion and recommendations in the last chapter. An abstract of the study has been highlighted as ‘Executive Summary’ at the beginning of this report.

CHAPTER II

LITERATURE REVIEW

2. 1 TRANSPORT SECTOR OF BANGLADESH

2.1.1 Overview

An adequate and efficient transport system is a pre-requisite for both initiating and sustaining economic development. Investment in improving transport efficiency is the key to expansion and integration of markets - sub-national, national and international. It also helps the generation of economies of scale, increased competition, reduced cost, systematic urbanization, export-led faster growth and a larger share of international trade.

Government has recently adopted a “Shipping Policy” for the country and a “National Land Transport Policy” is about to be finalized. Obviously, the development efforts and investments decisions so far, were driven by individual project considerations, without definitive and even sub-sectoral policy objectives for the transport parastatals. As a consequence, role of some of the dominant modes of transport has been marginalized. Modal distortions have occurred to the detriment of national economy and the environment.

The transport system of Bangladesh consists of roads, railways, inland waterways, two sea ports, maritime shipping and civil aviation catering for both domestic and international traffic. The relative roles of transport modes evolved with road transport expanding at the expense of railways and inland water transport. In terms of physical infrastructure, about 2800 kilometer of rail-route inherited in 1947 came down to 2746 km by 1998 and presently it has raised to a length of 2854.96 km. Navigable waterways declined substantially during the period for lack of proper upkeep. About 3500 km of waterways is navigable now as against 6000 km in 1947. Road sector, on the other hand, expanded disproportionately from 600 km of paved road in 1947 to nearly 25000 km by the year 2002. Roads have been built at places ignoring existence of parallel railway facilities.

In Bangladesh, development and maintenance of transport infrastructure is essentially the responsibilities of the public sector. The public sector is involved in transport operations in rail, road, inland water transport (IWT) and ocean shipping alongside the private sector. In the road transport and IWT sub-sectors, the private sector is

dominant. In ocean shipping, however, public sector still predominates, although the private sector has considerably increased its role in this sector in recent years. Recently private sector has also been involved in domestic air transport and railway operation in a very limited scale.

2.1.2 Transport Demand and Modal Shares

Bangladesh witnessed rapid growth of transport since Independence. The overall annual growth rate was nearly 8.2 per cent for freight transport and 8.4 per cent for passenger transport. Between 1974/75 and 1989/90, freight transport demand was estimated to have increased from approximately 2.6 billion ton-kms to 6.3 billion ton-kms. In the same period, the passenger transport demand was grown from approximately 17.0 billion passenger-kms to about 57 billion passenger-kms. The demand for freight and passenger transport in 2004/05 is estimated to have increased to about 20.3 billion ton-kms and 121 billion passenger-kms respectively. It is estimated that passenger and freight transport demand in 2009/10 will be increased to approximate 155 billion passenger-kms and 28.4 billion ton-kms respectively. Within these overall growth rates, the road transport demand increased at a faster rate and rail transport demand decreased considerably.

The relative roles of transport modes are evolving with road transport expanding at the expense of railways and inland water transport because of its inherent technical and cost advantages. According to Bangladesh Transport Sector Study (1994), the volume of road transport increased by 88 per cent from 1985 through 1993, whereas the volume of transport by water as well as rail declined in almost equal proportion. The following table (Table 2-1) presents estimates of overall transport output and the relative shares of the various transport modes. Modal share on 2009/10 is considered here based on the trends of current nature of growth for different transport demand. The data illustrates the rapidly expanding role of the road sector.

Table 2-1: Total Traffic and Modal Share

Year	Passenger				Freight			
	Total PKM (Billion)	Modal Share			Total TKM (Billion)	Modal Share		
		Road	Rail	IWT		Road	Rail	IWT
1974/75	17	54	30	16	2.6	35	37	28
1984/85	35	64	20	16	4.8	48	17	35

1989/90	57	68	17	15	6.3	53	17	30
1994/95	95	69	11	20	14.5	74	6	20
1996/97	105	73	13	14	16.2	63	7	30
2004/05*	121	69	12	19	20.3	74	7	19
2009/10*	*155*	*69*	*12*	*19*	*28.4*	*74*	*7*	*19*

Source: 1. Bangladesh Transport Sector Study, 1994 * Projected
2. Planning Commission, Transport Survey Wing, Government of Bangladesh, 1998.
3. Bangladesh Integrated Transport System Study. Final report. Dhaka

Transport output for passenger flows in Bangladesh is increasing rapidly. In 1992/93, 1.37 billion passenger trips were undertaken in Bangladesh. The average distance traveled for a passenger trip was 48 kilometers. The road sector has increased its share to about 69 per cent of total passenger travel demand of 95 billion passenger-kms in 1999/00. On the other hand, the rail sector continues to loss its share of passenger travel since more intercity passenger travel is now conducted through the road transport system, which offers faster, more convenient and cheaper services. Modal shares of three surface transports- road, inland water way and railway are graphically presented in the following figures (figures 2-1 & 2-2).

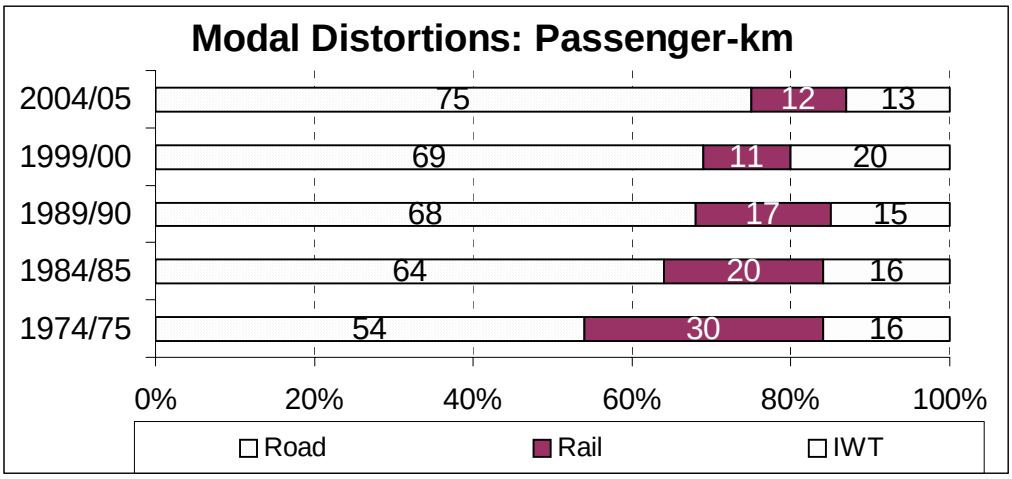


Figure 2-1: Modal Share by Different Modes of transport: Passenger Traffic

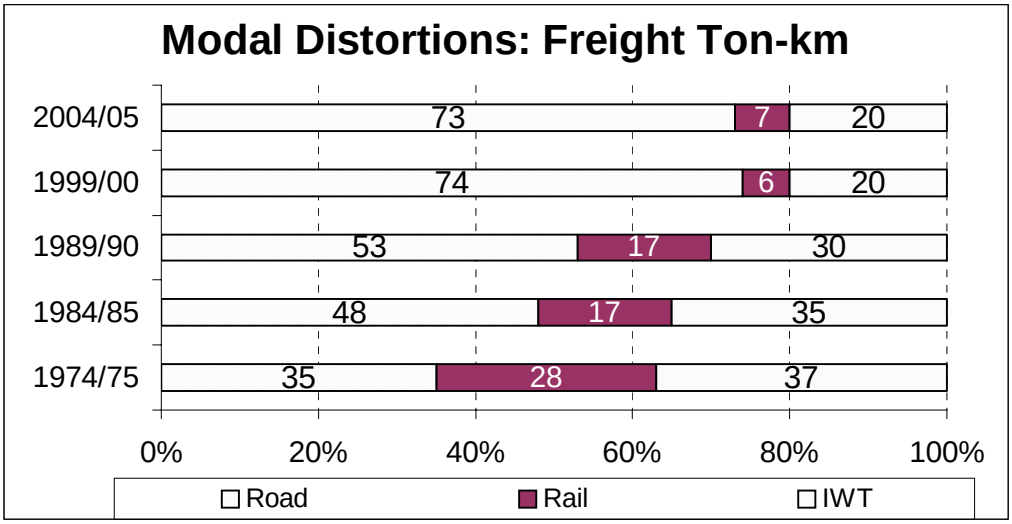


Figure 2-2: Modal Share by Different Modes of transport: Freight Traffic

The transport demand is expected to grow much faster than both the economy and population as the industrial structure of the economy changes, and as the transport network is further developed. Assuming GDP growth to be 5.5 per cent per year in near term and GDP-elasticity of transport demand as 1.5, passenger and freight transport demand is expected to grow at about 8.4 and 8.2 per cent per annum respectively.

Transport demand in Bangladesh is expected to increase considerably in the coming years, largely because of the increasing demand for freight transport and the expected increase in personal mobility. These are the result of higher Gross Domestic Product (GDP) growth, at 5.5 per cent per year on an average, and increasing urbanization in the greater Dhaka area. The opening of the Jamuna Bridge in June 1998 removed one major national transport barrier in Bangladesh. This, together with ADB-financed road and rail link projects and prospected up-coming of Padma Multipurpose Bridge including railway link, is expected to further increase freight and passenger movement. These major transport development projects are crucial for physical and economic integration of Bangladesh, linking the western and southern parts of the country with the commercial center of Dhaka and the country's primary port of Chittagong, both in the eastern half of the country. They are also important for improving access for the many poor people living in the agricultural areas in the northwest. Thus, the future expansion program of each of the surface transport modes in providing transport services depends crucially on government policy and investment decisions keeping in view the past transport development trend and the recently changed scenario in the transport sector.

2.1.3 Transport Intensity and Economic Growth

Transport development and economic development nexus or equivalently transport development strategy in support of economic development encompasses: (a) appropriate transport network strategy; and (b) effective regulatory and policy framework to entrance efficiency of transport.

In recent years, the transport demand for both the freight and passenger traffic has grown faster than the economy in general. Between 1992/93 and 1996/97, the GDP growth rate was 5.5 per cent compared with nearly 8.2 percent growth in freight transport demand and 8.4 per cent growth in passenger transport demand. This suggests a GDP-elasticity of transport demand to be about 1.5 each. Transport intensities in Bangladesh are expected to increase considerably in the coming years as the country continues to move from subsistence to a more market-based economy and as the major transport barriers have already been removed by the opening of JMB.

Bangladesh has considerably lower transport intensity for both freight and passenger movements (about one-fifth to one-third of their levels for freight and one-half to one-sixth for passenger transport demand). Although road density in km per 100 km^2 in Bangladesh is second highest (69.2 compared to 70 in USA) in the world, but road density in km per 1000 persons in the country is still one of the lowest in the world (0.88 against 27 in USA). Transport intensity of the Bangladesh economy is still considerably lower than that of neighboring countries in Asia. Freight transport intensity at 0.28 ton-km/$GDP, is between a third to a fifth of equivalent figures for countries such as India and Thailand. Passenger mobility in Bangladesh is about 350 km per capita, as compared with 770 for India and over 1000 for Malaysia. A country of about 1,45,000 sq. km area, having a population of about 140 million at present, would have to cater for the transport needs of 200 million people by 2020. If transport intensity based on road system alone is to reach somewhere near to any developed country, the entire population might have to migrate elsewhere to a make room for road infrastructure, an unsustainable situation from land use point of view alone.

2.1.4 Corridor Assessment

The corridor analysis is based on the transport network model developed for Bangladesh. The analysis is intended for providing a macro perspective of the country's transport network and guidance for overall network development strategy on the basis of importance of respective corridors. Transport flows of Bangladesh take place through five corridors namely Dhaka-Chittagong, Dhaka-Northwest, Dhaka-Khulna, Dhaka-Sylhet and Khulna-Northwest corridors. The volume of traffic generated on these corridors has been presented in Table 2-2.

Table 2-2: Estimated Traffic on Five Corridors of Bangladesh: 1996

Corridors	Passenger in Million				Freight in Million Tons			
	Road	Rail	IWT	Total	Road	Rail	IWT	Total
Dhaka-Chittagong	14.9	7.9	3.7	26.5	6.6	1.2	2.8	10.6
Dhaka-Northwest	5.0	5.2	1.9	12.1	3.9	0.7	2.6	7.2
Dhaka-Khulna	13.0	-	12.5	25.7	3.8	-	2.3	6.1
Dhaka-Sylhet	4.8	5.4	4.0	14.2	2.6	0.2	2.0	4.8
Khulna-Northwest	4.0	5.5	-	9.5	2.1	0.2	-	2.3

Source: BITTS, 1997.

For transport network development strategy, an optimal mix of "market integration approach" and "poles of development approach" will be adopted. Operational significance of this mixed strategy is that development efforts will be concentrated on these five main corridors with special emphasis on Dhaka-Chittagong, Dhaka-Northwest and Khulna-Northwest arterial corridors. To achieve an average GDP growth rate of 5.5 per cent per annum the transport sector growth rate is projected to increase by at least 8.3 per cent per annum on an average. Keeping in view the increased volume of domestic traffic as well as the accommodation of future traffic from the Asian Highway and Trans-Asian Railway, the main objective of our Transport Plan should be to develop a balanced and integrated transport network through adoption of strategies/programs as described below:

- The `Arterial Corridors' will be designated, as 'Strategic Corridors' and required investment will be made for their development and to raise them to international standards so that these can carry the regional and inter-regional traffic.
- The two Sea Ports will be further developed and linked to Dhaka by improved railways networks, which connects all the four major regions of the country.
- Railway linkages between the east and west zones of the country should be well integrated.
- Improvement in resource mobilization will be made through introduction of user charges and fees by the agencies.

- Improvement of the management and operation of transport parastatals, including eventual privatization of some specific transport parastatals will be aimed at.
- Provision of required incentive packages for the private sector for greater participation, not only in transport services, but also for infrastructure building will be made.
- Identification and implementation of preventive, emergency and post-disaster mitigation measures will be made. To minimize accident, safety administration will be adequately strengthened.
- Broadening the framework of transport development strategy by incorporating the vital urban transport dimension starting with improvement in transport services of greater Dhaka city will be undertaken.
- Assurance of deficit-free operation of Bangladesh Railway as envisaged in Railway Recovery Program will be fulfilled.
- Introduction of necessary institutional reforms to address the operational constraints of the port transit system with special reference to containers and privatization measures for port transit system will be made.
- Adequate care will be taken while developing transport network and service so that these do not cause environmental pollution and affect ecological balance.

2.1.5 Major Constraints in Transport Sector

The development of surface transport system in Bangladesh is constrained by three distinct sets of factors. These are physical (e.g., difficult terrain, periodic flooding, poor soil condition, siltation and erosion of rivers, inherited management weaknesses of BR etc.), low investments and maintenance and inadequate institutional framework (four ministries, nine transport sector parastatals and lack of co-ordination and autonomy of transport parastatals).

2.1.6 Transport Sector Allocation In Past Plans

The public sector allocation for the transport sector during the past Plans in base-year prices of each plan period are shown in Table 2-3.

Table 2-3: Government Allocation of Funds for Transport Sector in Different Plan Periods

Plan Period	Allocation in Million Taka				
	Road	Railway	IWT	Airways	Transport Sector
First Five-Year Plan (1973-78)	1,496.10	1261.30	1,862.20	656.50	5276.10
First Two-Year Plan (1978-80)	1,687.90	1230.80	1,098.60	482.70	4500.00
Second Five-Year Plan (1980-85)	4,090.20	4133.90	3,168.70	1,471.80	12864.60
Third Five Year Plan (1985-90)	11,853.00	8360.00	5,710.00	2,100.00	30023.00
Fourth Five-Year Plan (1990-95)	34,650.00	8350.00	7,930.00	2,800.00	63730.00
Second Two-Year Plan (1995-97)	18,467.10	3986.70	1,319.00	1,027.00	45479.00
Fifth Five-Year Plan (1997-2002)	-	24000.00	-	-	118000.00
Three-Year Rolling Investment program (2004-2006)	-	75573.10	-	-	-

From the analysis of sector-wise fund allocation for transportation sector we observe a radical shift of government fund allocation for roads sector from railways and IWT. In the First Fifth Year Plan (1973-78), railways got 20.91%, roads 28.30%, IWT 35.30%. In the Fourth Fifth Year Plan (1990-95), railway got only 13.10%, whereas roads' share increased to 54.07%. In the Second Two Year Plan (1995-97), railways' share decreased to only 8.77%. The percentage of sector-wise fund allocation for transport sectors of Bangladesh are shown in the Figures 1-3.

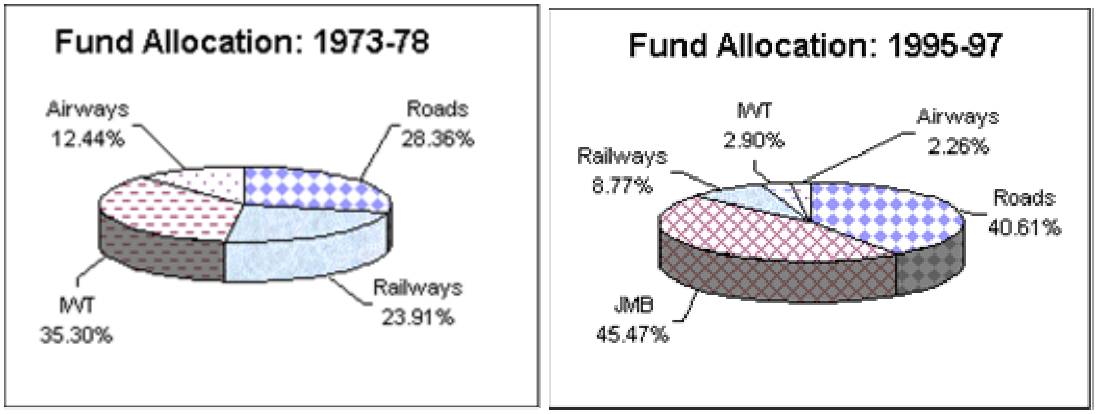


Figure 2-3: Sector-wise Fund Allocation for Transport Sector
Source:

Tk. 3300.51 core was allocated for the Ministry of Communication in 2001/02, where RHD alone shared about 77 per cent and railway got only about 20 per cent of it. In 2003/04 BR shared only 19.81 per cent of total sanctioned of Tk. 3097.55 crore for the ministry (Figure 2-4).

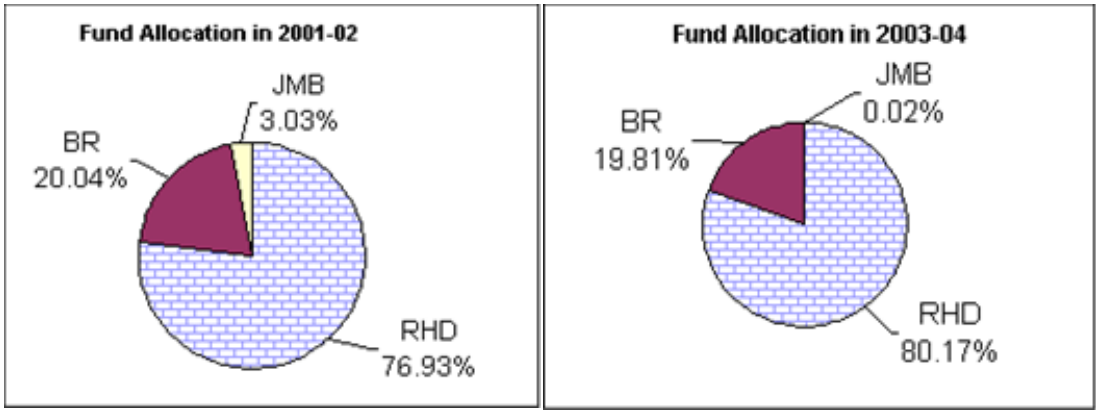


Figure 2-4: Sector-wise Fund Allocation of the Ministry of Communication

Source: Ministry of Communication, Bangladesh

2.2 Multimodalism: The Alternative Sustainable Transport System

There is no doubt that the transport sector issues are to be addressed in a holistic manner with an integrated policy approach rather than piece-meal sub-sectoral approach that has been adopted so far. 'Multimodalism' refers to a holistic view of transportation. 'Multimodalism practices' address all modes of transportation collectively including the linkages, interactions, and movements among modes of transportation. Individual modes work together or within their own niches fulfilling the economic and environmental sustainability criteria. Different modes fit into the transport chain by virtue of their quality and competitiveness of service. For transporting freight and passengers through a multimodal chain, all the component parts are to be seamlessly linked and efficiently coordinated to offer the shippers and travelers a full range of options from which to select preferred routings and methods of transport.

Implementation of multimodal practices would require an integrated policy approach to guide transport investment decisions on the basis of appropriate assessments of impacts of all modes of transport to ensure that investment meets the policy objective of sustainable development. The intrinsic advantages of the individual transport modes would be exploited to develop synergies between the modes in the interest of the economy and the environment. The policy should aim at the following broad objectives:

a. ***Integration***

- within and between different types of transport, so that each contributes its full potential and people can move easily between them
- with the environment, so that the transport choices available support a better environment
- with land-use planning, at national, regional and local level, so that transport and planning work together to support more sustainable travel choices and reduce the need for travel and
- with policies for education, health and wealth creation, so that transport helps make a fairer, more inclusive society;

b. ***Safety***- to improve safety for all transport users;

c. ***Economy***- supporting sustainable economic activity incorporating land-use planning in different parts of the country;

d. ***Environmental impact***- protecting the built and natural environment;

e. ***Accessibility***- improving access to everyday facilities for those without private transport and reducing social exclusions.

2.3. Multimodalism and Bangladesh Railway

Rail transport is the strategic sector, on which the success of the efforts to shift the present modal balance will depend, particularly in the case of goods. The economic case for railway mode has been re-established globally in consideration of the following aspects. Bangladesh should be no exception in this scenario.

- **Energy efficiency:** Not only is it environmentally friendly, rail scores over other modes in terms of energy consumption, being the most economic of all forms of land transport as demonstrated below:

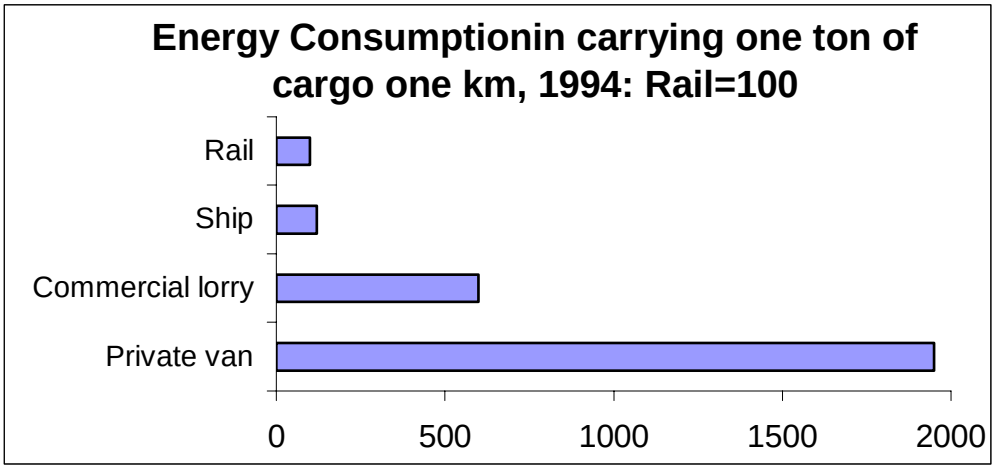


Figure 2-5: The Cheapest way of Transport

Source: Japanese Ministry of Transport, Internet

- **Safety:** Rail is also one of the safest modes of transport as the sketch below amply proves:

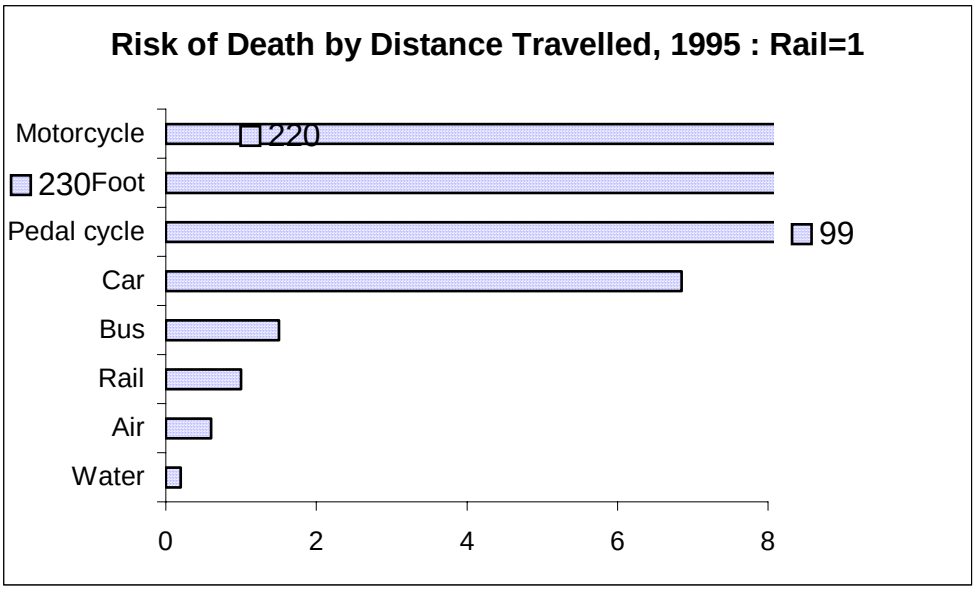


Figure 2-6: Safest mode of transport

Source: UK Department of Transport, Internet

- **Land use:** Land requirement for rail is 1/4th of that for road based transport system for carrying comparable volume of passenger and freight on high density intercity and intra-city corridors.
- **Environmental consideration:** rail is much more environment friendly (less pollution, less emission, less noise) compared to road transport.
- **Alternative energy use:** rail can use electrical energy obtainable from natural gas available in the country where as road vehicle would continue to depend on imported fuel.
- **Container carrier:** rail has already established role as a multimodal carrier of containers in the country. Sea-borne containers coming through Chittagong port and consigned to Dhaka ICD and vice-versa use single unified shipping document.

2.4 Bangladesh Railway: At A Glance

Bangladesh railway, covering a length of 2854.96 route kilometers, managed by about 34,168 regular staffs, is the Government-owned and Government-managed largest transportation agency of the country. Due to truncation from the main system of the then British India rail network, BR is handicapped to serve the country effectively and efficiently without proper re-orientation and development. Since the birth of Bangladesh in 1971, instead of constructing new railway lines, some of the branch line railway sections were declared redundant and subsequently closed and no proper attention to maintain the existing assets was being given.

Since its journey on November 15, 1862, BR has passed a glorious past. The historical events of Bangladesh Railway are briefly presented at the end of this report (in appendix: A-1). As railway is a very important mode of inland transport, linking the entire length and breadth of the country, it's healthy grow naturally contributes to the economic development of the country.

Bangladesh Railway covers 44 civil districts of the country. The rail-route is composed of MG & DG (with a combination of DG in some sections) tracks. East Zone has 1,302 route kilometers of MG track only and West Zone has 533 route kilometers of MG, 660 route kilometers of BG and 365 route kilometers of DG track. The total length of running track including track on double line, in the yards and sidings is 4,442.95 kilometers. The railway network is shown in figure A-1 in the appendix.

Presently, Railway is under the Ministry of Communication and entrusted with Director General (DG) drawn from the Railway professionals. It is bifurcated into two zones, East & West, under the administrative control of two General Managers, who

are responsible/accountable to the DG of BR. For policy guidance, a 9(nine) member Bangladesh Railway Authority (BRA) has been formed with the Minster of Communications as its Chairman. The Director General is assisted by in Additional Director General and second Joint Directors Generals. The General Managers of the two zones are assisted by various specialized departments who are responsible for operation, maintenance and financial management. Each zone is again divided in two divisions, which form the basic unit of operation. The schematic organogram of BR is shown in the appendix (A-2).

The net operating revenue without considering the effect of PSO and Welfare Grant of BR for the year 2003-04 amounted to Tk. 2,452.36 million (Tk. 1,418.27 million considering the effect of PSO and Welfare Grant). The operating ratio was 128.5% in 2003-04 considering the effect of PSO and Welfare Grant.

The strength & assets of Bangladesh Railway and other important information are given in the Information Mirror in appendix.

CHAPTER III

ISSUES OF BANGLADESH RAILWAY EFFICIENCY

3.1 Overview

During the last decades, the shares of the different modes have undergone major change and as experienced in other countries, road transport of the country has grown rapidly and rail‘s share has slipped down considerably. Critical analysis of the efficiency of BR points up the dramatically worsening operating ratio over the last decades. This raises the question **‘how far will the present trends continue?’** and **‘is it not possible to upgrade the overall operating performance of BR at all?’**

The pessimism as to whether BR can, in fact, turn itself around is based on a number of considerations. The three critical ones appear to be:

- The ongoing decline in BR’s operating performance;
- BR’s failure to meet its action plan commitments on reform processes; and
- BR’s inability to get the political attention to resolve its problems.

Although some of the problems are well documented, others have curiously received little attention of any governments in the past.

In the post liberation period and till early eighties BR seemed to perform well, optimally realizing its full potential, of course, subject to inherited structural and physical constraints. Current poor performance is usually a reflection of poor operating performance due to inefficiencies/lower productivities of both physical and human capital caused by development resource, and institutional and policy constraints. This in turn adversely affects the financial performance of BR. However, in the process, after a certain stage, vicious circle starts when poor financial health (result in resource constraints) causes poor operational health and vice versa.

Bangladesh may also play an increasingly important role as a hub for sub-regional transport, more effectively linking Bhutan, India, and Nepal; providing access to ports; and offering transit routes for India to its eastern states. Interregional rail traffic (freight traffic) between Bangladesh and India is already increasing at a considerable rate. Further rail traffic (both passenger & freight) increases are contained by political issues as well as outdated operational procedures and cumbersome administrative arrangements at border crossings between Bangladesh and India which should be resolved as early as possible.

The main factors behind the reduced competitiveness of rail transport are institutional shortcomings and physical bottlenecks resulting from poor infrastructure and antiquated rolling stock. BR is also severely restricted by its two different gauge systems (broad and meter gauge), which is a legacy from the development of the railway network on the Indian subcontinent prior to its partition in 1947. To maintain a competitive position, railways concentrate on long-haul transport, particularly freight movements and intercity passenger traffic. Rail has also a potential role to play in mass transit for people in greater Dhaka, which is experiencing a rapid increase in motorized traffic. Experience elsewhere shows that rail transport creates less environmental damage than road traffic and can reduce pollution, congestion, accidents, and fatalities.

3.2 Social Cost

The BR is one of the largest Government enterprises in the country and constitutes so to say the 'life line' of the nation. The network of railway not only serves the country's trading community but also plays a vital role in the socio-economic development and industrialization of the country. Although BR is expected to serve both as a commercial enterprise and as a public utility service, but, as a commercial enterprise, it has an obligation to generate sufficient revenue to meet the cost of operation, pay interest on the capital of the Government & foreign loans and provide funds for renewal of assets and modernization of the system as a whole.

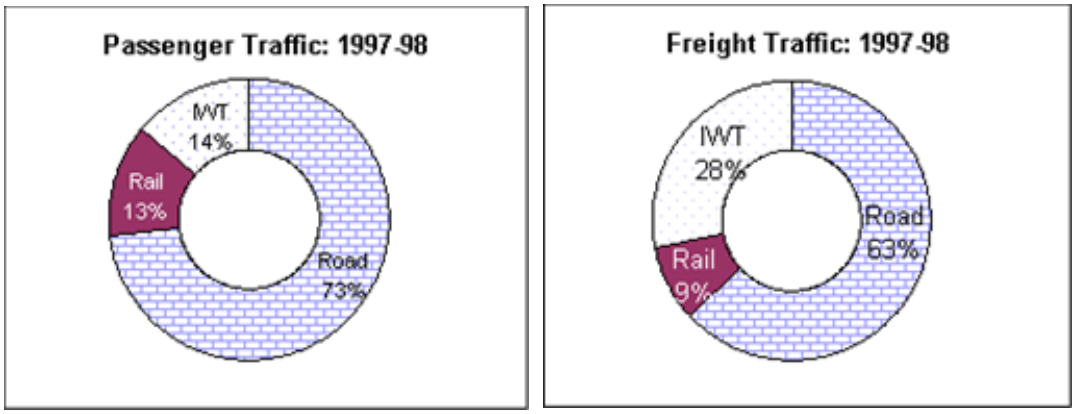
However, as a foremost public utility service, the railway has a special responsibility to provide the transport services for the movement of commodities of mass consumption and the large number of passengers. Tariff of the railway is not cost-based and is dictated by the wider social and economic interest of the country. Consequently, it has not been possible for BR to balance the earning and the expenditure due to the continuation of operation of non-profitable services, especially, the uneconomic branch lines or train services and few other similar non-economic factors. Besides, as a matter of national policy, BR is required to provide transport of essential commodities on top priority basis in emergent situations and also to provide concession transport facilities for essential commodities of common consumption by the economically weaker sections of the community. This kind of inevitable services on the part of BR is outside the concern of any commercial enterprise.

3.3 Operational Performance Of BR

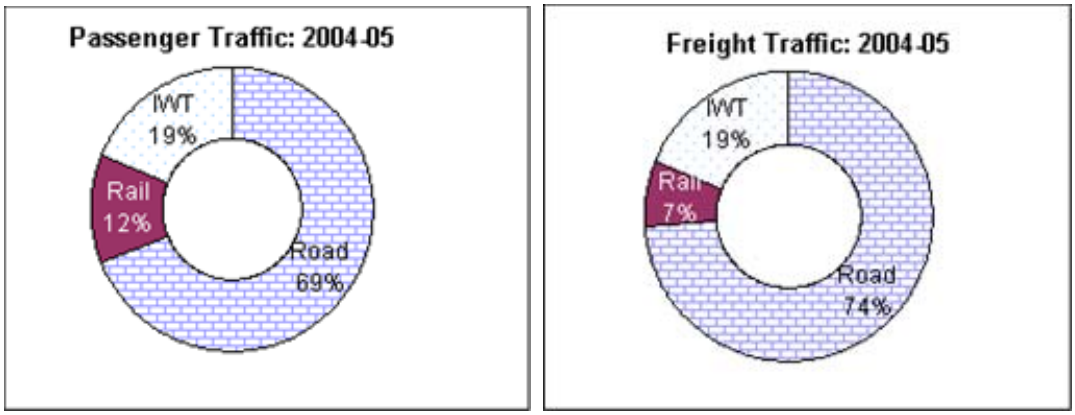
3.3.1 Modal share

During the last decades, the shares of the different modes of transport have undergone major change. As experienced, road transport has grown rapidly and rail's share has slipped gradually. Inland water transport has remained largely unchanged. Figures 3-1

shows the modal share of passenger and freight traffic by railway in context of other modes of transport means.



(a)



(b)

Figure 3-1: Modal Shares by Different Modes of Transport

3.3.2 Passenger traffic

With the development of road transport facilities there has been a shift in the trend of passenger traffic with short distance passengers preferring road transport, because of their frequent and point-to-point services. During 2003-04, BR transported about 43.44 million passengers against about 39.16 million in 2002-03 but 73 million in 1969-70. But the total passenger-kilometers in 2003-04 were 4341.47 million passenger-kms against 3316 passenger-kms in 1969-70 and 4024.21 million passenger-kms in the previous year. (Figures 3-2 & 3-3).

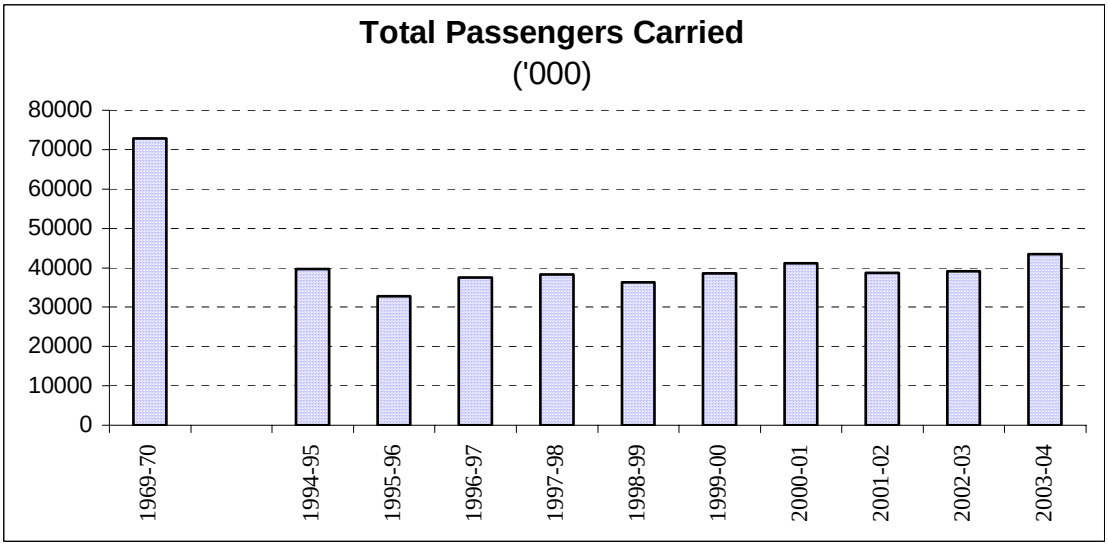


Figure 3-2: Total Passengers Carried by BR
Source: BR Information Books

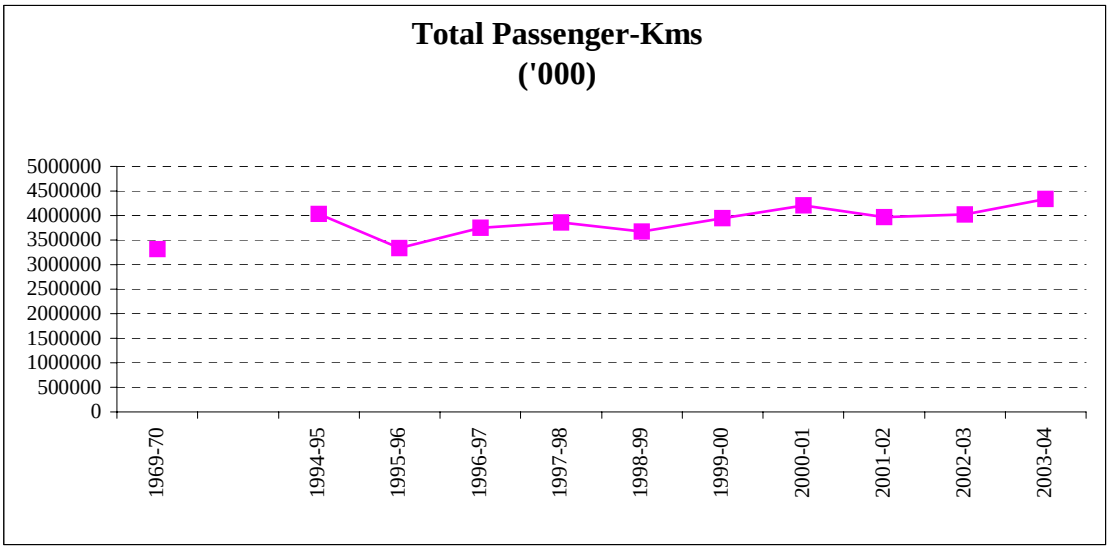


Figure 3-3: Total Passenger-Kms Carried by BR
Source: BR Information Books

3.3.3 Freight traffic

The railway has been facing tough competition with other modes of transport for the high rated traffic, which pay more revenue. On the other hand, the railway is called upon to carry traditional low rated essentials. As a national carrier, BR has obligation to carry essential commodities like food grains, fertilizer, jute, cement, coal, iron and

steel, stone and boulders, petroleum products, salt, sugar etc. to the remote corners of the country at a cheaper rate. The freight traffic during 2003-04 was 3473 thousand tons against 3666 thousand tons during 2002-03 and 4879 thousand tons in 1969-70. Net ton-kms in 2003-04 was 895.5 million and in the previous year 951.99 million which was 1265.06 million in 1969-70. These figures show the decreasing trend in freight transportation performance of BR for years together. Figure 3-4 and 3-5 show the freight carrying performance of BR.

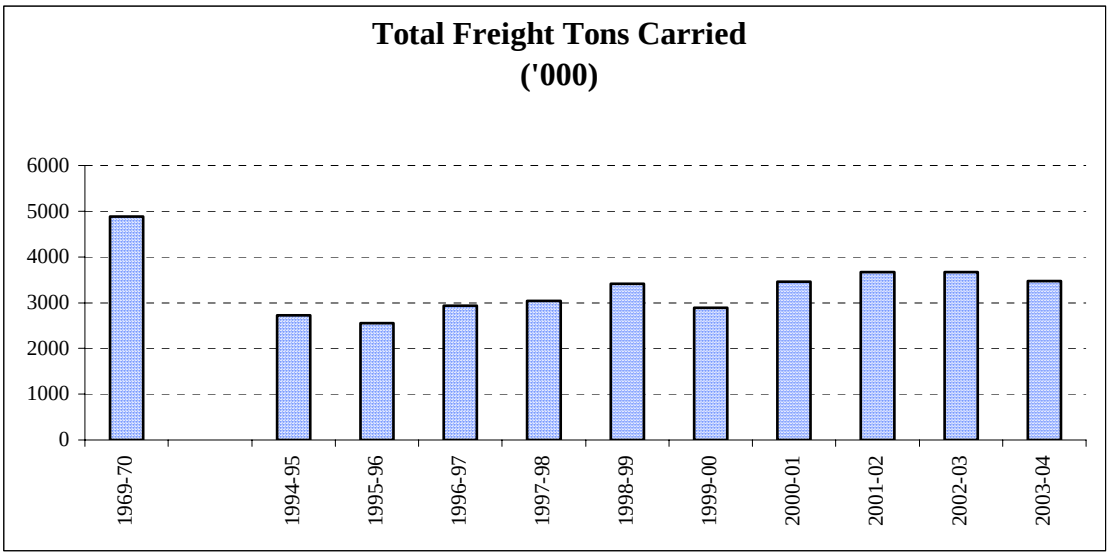


Figure 3-4: Total Freight Traffic Carried by BR
Source: BR Information Books

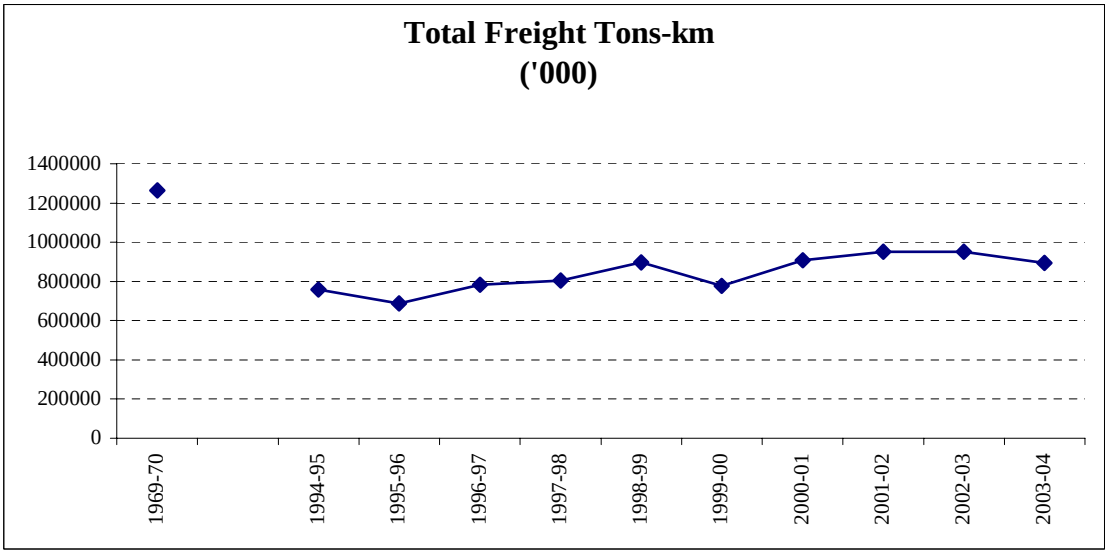


Figure 3-5: Total Freight Ton-kms by BR
Source: BR Information Books

3.3.4 Container services

During the year 2003-04, a total of 70,247 number of containers were handled at Chittagong Port and Dhaka ICD which were only 15010 in 1993-94. A total of 541963 tons of different commodities were transported in those containers, which contributed a total of Tk. 374,441,891 to the railway revenue. Figure 3-6 shows the incremental growth of the container services by BR.

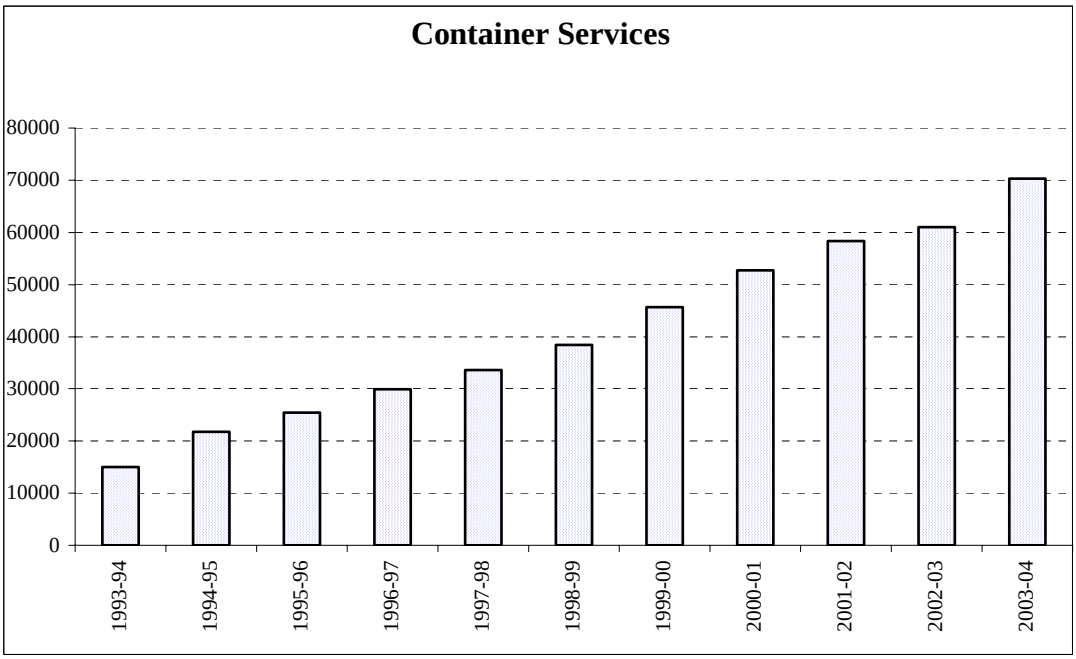


Figure 3-6: Container Services of BR
Source: BR Information Books

3.3.5 Operating Income & Operating Ratio

Traffic-wise income of BR is shown in the figure 3-7. During the year 2003-04, net operating income of BR amounted to a deficit of Tk. 1418.27 million and the operating ratio was 128.5% considering PSO compensation & welfare grant which was 640.03 million and 112.2% in the previous year respectively. Figure 3-8 & 3-9 show the trend of Operating Income & Operating Ratio of BR.

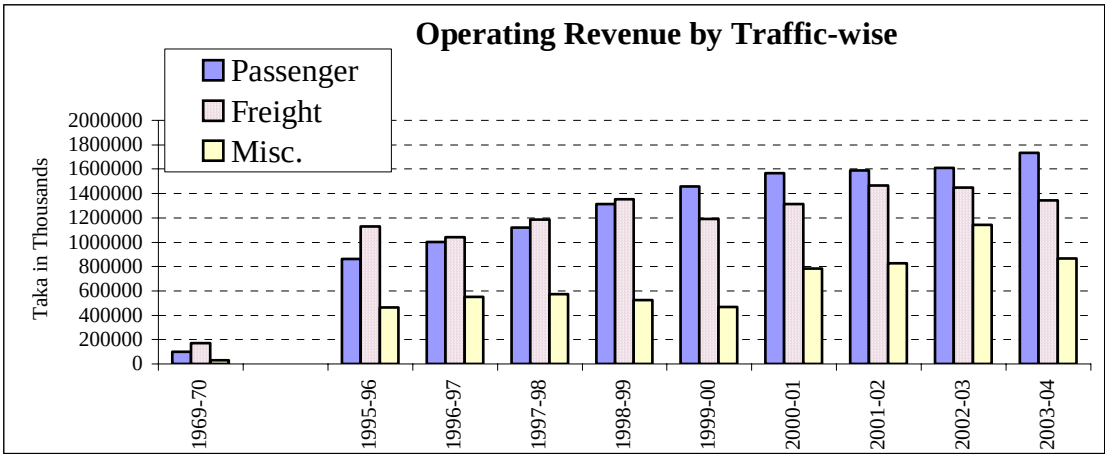


Figure 3-7: Traffic-wise Operating Revenue by BR
Source: BR Information Books

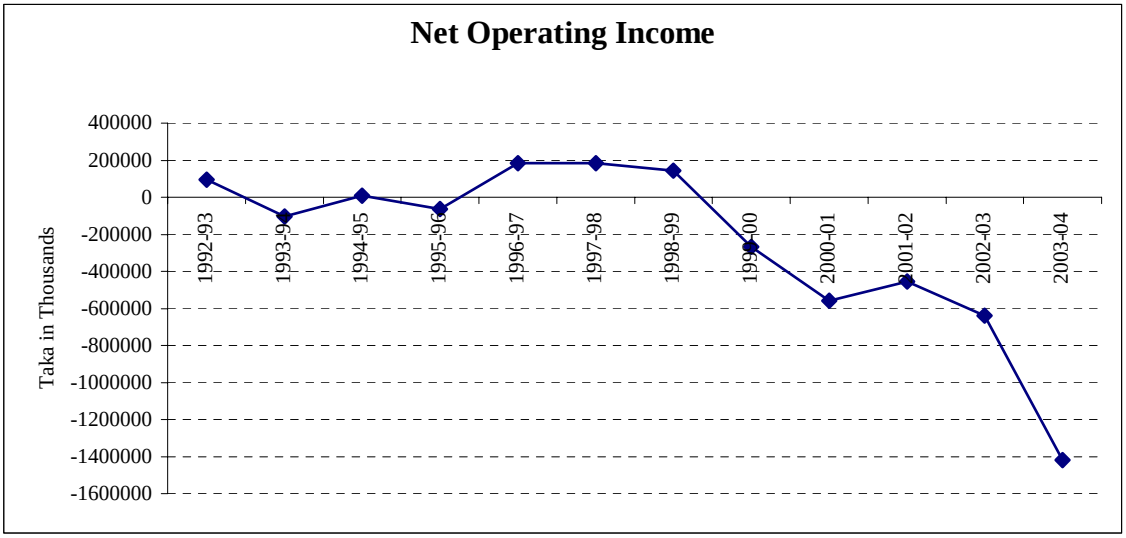


Figure 3-8: Net Operating Income of BR
Source: BR Information Books

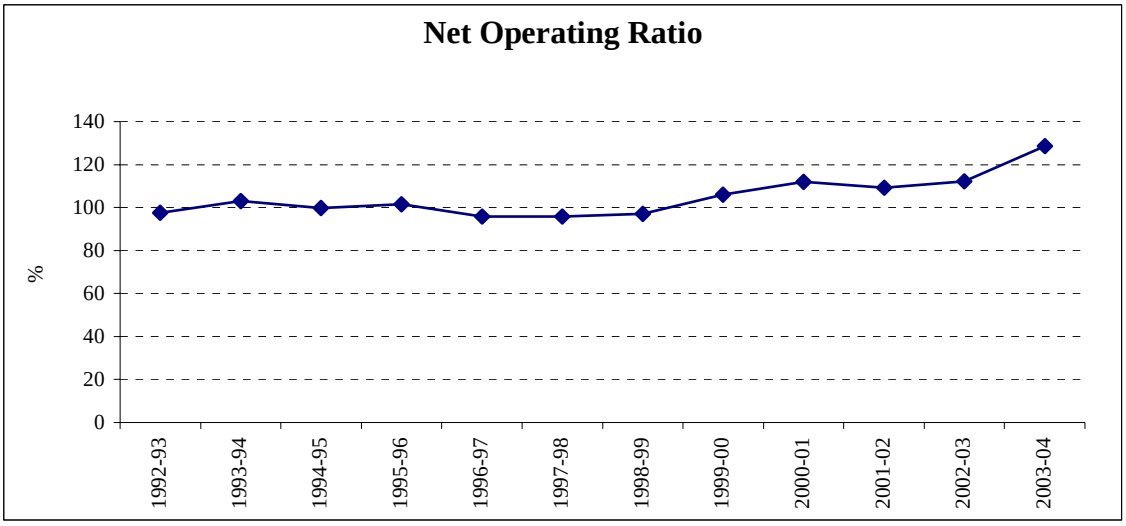


Figure 3-9: Net Operating Ratio of BR
Source: BR Information Books

3.4 Operational Problems of BR

3.4.1 Inherited physical problems

Bangladesh Railway is made up of truncated portions of the then British-Indian rail system, which after 1971 War of Liberation, fell in Bangladesh territory. In the process, BR inherited a number of structural and physical weaknesses as a part of its legacy, since it was not specially designed and constructed to serve Bangladesh. Presently there are a number of missing links for direct through traffic. Due to truncation from the main system, BR is handicapped to serve the country effectively and efficaciously without proper re-orientation and development

3.4.2 Gauge problems

Bangladesh Railway has been suffering from various operating bottlenecks. The railway system comprises two gauges, BG & MG, which involves transshipments of traffic at the break of gauge points. Recently, Dual Gauge (DG) has been constructed in some important sections to ease the problems.

3.4.3 Geographical constraints

Rail transportation is very much attractive for long distance uninterrupted route network. But Bangladesh, a small county of only 1,55,598 square kilometers, is a land

of rivers. Hundreds of rivers are flowing over the territory. Before constructing JMB, the underdeveloped northern part of the country was truncated from eastern part i.e. from the capital city of the country. Recently the through traffic has been plying over JMB although JMB Railway Project has not yet been completed for BG trains. Presently there is no direct rail-route connection of the city to the Southern part of the country. Transshipments are also involved at reverine points. Besides, during rainy season direct route links are often disrupted in many points.

3.4.4 Managerial Problems

Bangladesh Railway management system is under experiment for a long time. Till June 2, 1982, the management and development of railway was vested with a Railway Board, comprising of a Chairman and four members. But, for administrative convenience and operational reason the Railway Board was abolished with effect from June 3, 1982 and the function of the Railway Board was vested with the Railway Division of the Ministry of Communications with the Secretary of the Division working of as the Director General of Bangladesh Railway. For the same purpose the Railway bifurcated into two zones, East & West, under the administrative control of two General Managers (GMs), who are responsible/ accountable to the Director General (DG) of Bangladesh Railway. Subsequently on August 12, 1995, Railway was separated from the Ministry and entrusted with Director General drawn from the Railway professionals. For policy guidance, a 9 (nine) member Bangladesh Railway Authority (BRA) was formed with the Minster of Communications as its Chairman. The Director General is assisted by in Additional Director Generals and second Joint Directors Generals. Frankly speaking, the DG holds little control over different activities especially related to planning & policy formulation. This creates operational as well as planning and development problems. For this reason, restructuring of BR i.e. organizational reform is very much necessary to develop efficient and active management system.

3.4.5 Lack Of Govt. Attention

Bangladesh Railway is a neglected sector for a long period. No Government of Bangladesh has patronized this thrust sector properly for unknown reasons. Road infrastructure has developed tremendously for huge invest during the last decades. On the other hand, negligible allocation of resources to rail sector compared to roads has led to paralyze the rail transportation system of the country year after year. No remarkable project/program has been taken to develop and strengthen the railway network; on the contrary, existing railway infrastructures cannot be properly maintained due to lack of resource. As a result, railways are always at a disadvantage compared to road transport.

3.4.6 Lack Of Modernization & Development

The expansion of BR has been blocked since 1947. Only 80 kms rail line has been constructed for last 50 years. On the other hand, more than 1200 kms rail lines are under risk for operation due to lack of proper maintenance and attention which is mainly for insufficient fund allocation. As a result, derailment has become common. This has adverse impact on the efficiency and reliability of railway services.

On of the major problems, presently faced by the Bangladesh Railways is a serious shortage of locomotives and route capacity. Far from having insufficient traffic on its trunk routes, the BR suffers an excess of traffic in relation to the capacity of these routes. Operating priority on these routes is given to passenger trains, and freight trains incur major delays and frequent cancellations as a result.

Since the liberation of Bangladesh, instead of constructing new rail-routes, some of the branch line railway sections were declared redundant and subsequently closed and no proper attention to maintain the existing asset was being given. The condition of locomotives (rail engines) is also miserable. The musclemen are occupying railway land and properties. Already 12,000 acres lands have been illegally dispossessed out of its 23,900 acres land. No guardian stands to say for BR, to see its future. At present, BR owns 170 trains of which 34 are Intercity, 40 are Mail & Express and rest 96 are local trains (66 in East zone and 30 in West zone). The serviceable life of the locomotives of 140 trains out of 170 has already been expired. Most of the locomotives are running over 50 years. Presently, railway owns 1400 carriages/bogies (400 for Intercity, 400 for Mail & Express and 576 for local trains) and most of them are backdated.

Although huge development budget has been allocated for Communication sector especially for roads & highways sector, little attention has been given to rail sector. Thus BR was forced to face the uneven competition with other modes of transport. So it is a challenge for BR to eliminate the inherited structural and physical weakness of Bangladesh Railway. To strengthen the efficiency of BR, proper attention will be given to this trust sector. Government has to patronize the sector properly for its healthy growth and development. In the same time, operational & maintenance as well as overhead cost will have to be minimized, management will have to be efficient, and number of employees will have to be rationale.

3.4.7 Lack Of Coordination

Bangladesh railway is a large organization comprising of two zones- East & West, divided by the river Jamuna, under the administrative control of two GMs who are accountable to DG. Each zone is further divided into a numbers of divisions under the control of Divisional Railway Managers (DRMs) in association of different Departmental Heads & subordinates. This large amalgamation frequently creates

coordination problems.

In the railway services, the Railway cadre is composed of two BCS cadres: BCS (Railway Engineering) and BCS (Transportation & Commercial). The Engineering Cadres are composed of 5 sub-cadres: Civil, Mechanical, Signal & Telecom, Electrical and Stores. All day-to-day operation and maintenance of BR are performed as a concerted effort of these different Departments. Besides, a strong Audit & Accounts Department (BCS Audit and Accounts Cadre) is responsible for keeping railway accounts. Moreover, RNB (Railway Nirapapatta Bahini) in addition of Railway Police, Medical Department etc. are to help in BR's operation. Due to the combination of large number of departments, there is always a possibility of internal clash on different issues.

3.5 REFORM OF BANGLADESH RAILWAY

3.5.1 Need for Reform

Bangladesh Railway, a principal transportation agency of the country, is the largest Government Organization, serving large numbers of population of the country. As railway is a very important mode of inland transport, its healthy growth naturally contributes to the economic development of the country. But BR has been suffering from various operating bottlenecks for years after years due to lack of proper planning & integration, government attention, inefficient management system and adequate maintenance and replacement. It's continuing large deficit and the high level of direct and indirect Government subsidies is probably the single biggest issue forcing Government of Bangladesh in the transport sector.

Modernization of railway communication is necessary by adapting new technology, introducing high-speed train and standardizing railway tracks and signaling systems. To strengthen the efficiency of BR, proper attention will be given to this trust sector. Private sector involvement on selective basis in operation and maintenance of BR should be encouraged. Government has to patronize the sector properly for its expansion and development. In the same time, operational & maintenance as well as overhead cost should be minimized, management should be efficient, and number of employees should be rationale. Finally, an appropriate market-based reorientation is very much necessary for the healthy growth and development of Bangladesh Railway.

3.5.2 Railway Recovery Program

Bangladesh railway has embarked upon a comprehensive Railway Recovery Program (RRP) in order to improve its financial performance through increased efficiency and cost reduction. The key elements of RRP are:

1 Improving labor productivity primarily by reducing surplus employees (reduction of workforce from 58,000 to 35,000 through voluntary separation

and natural attrition);

2 Reducing losses on different services by closing a number of money losing branch lines, stations, sheds, depots etc. and withdrawal of some non-profitable passenger train services;
    1 Replacing open ended subsidy with compensation under Public Service Obligation (PSO) system by the government for running services on social consideration, in place of open subsidy;
3 Improving operational efficiency through optimizing the use of assets
4 Making the Railway more responsive to market needs through organizational reform incorporating structural changes and sound business practices
5 Exploiting commercially surplus land and other capacities of Railway

The principle of the reform process in BR is to transform BR into a more commercial organization. This would result in a sustainable and financially viable carrier and ensure less government interference in respect of organizational and commercial decisions of BR. This would mean progressive independence of BR from the government. In the process of reform efforts, major objectives of Railway development plans for different plan period are given below:

- **First Five Year Plan (1973-78):** Rehabilitation and reconstruction of damaged railway system
- **First Two Year Plan (1978-80):** Completion of the work of rehabilitation and reconstruction
- **Second Five Year Plan (1980-85): A**chievement of a reasonable level of efficiency in assets utilization. The bulk of the investment was for replacement, renewal and rehabilitation of track, rolling stock and signaling equipment
- **Third Five Year Plan (1985-90):** Similar to Second Five Year Plan, with greater emphasis on modernization of signaling and telecommunication system, fabrication of carriages and training of officers and staffs
- **Fourth Five Year Plan (1990-95):** Improvement of operational efficiency, reduction of financial loss, development of repair and maintenance facilities, rehabilitation of track and bridges on a selective basis and introduction of pre-stressed concrete sleepers on core lines
- **Second Two Year Plan (1995-97):** Completion of spilled over projects of Fourth Five Year Plan period
- **Fifth Five Year Plan (1997-2002):** Establishment of a direct railway link between east and west Zone through Cross Jamuna rail connection, feasibility study on Dohazari-Cox's Bazar rail line, improvement of line capacity and opening up avenues for private sector participation in BR activities
- **Three year Rolling Investment program (2004-2006):** Establishments of direct railway connection between the capital city Dhaka and the west Zone by converting Dhaka-Joydebpur MG section to Dual Gauge (DG). Rehabilitation

of branch lines, construction of direct rail link from western side of Jamuna Bridge to Bogra and eastern side of Jamuna Bridge to Tarakandi. Modernization of signaling & interlocking systems of different stations. Procurement of new carriages and locomotive for improvement of passenger services.

Due to some constraints, the above-mentioned objectives have not yet been attained fully within the timeframes. If the above rehabilitation program is successfully completed, BR will be more efficient and dynamic in operation.

3.5.3 Rehabilitation And Modernization

Bangladesh Railway cannot serve the country in full swing, as it was not designed to serve this present geographic territory. Due to truncation from the main railway system, there are a numbers of missing links in different sections of the present railway network. For proper utilization a numbers of links should be constructed. Besides, due to lack of proper maintenance for a long time, BR has become paralyzed. For this reason, urgent action program should be taken for the rehabilitation of branch lines and modernization of signaling & interlocking systems of different stations to make BR more efficient and functioning. Procurement of new carriages and locomotives are very much necessary for smooth operation and improved services.

3.5.4 ADB Support & BR

During the last decade, the Government, with ADB support, has made notable progress in restructuring BR. Under the Railway Recovery Program, which was implemented from 1994 to 1998, the Government took significant steps to commercialize and restructure BR, mainly restructuring the organization, introducing new tariff policies, and reducing staff numbers (from 55,400 in 1992 to 38,100 in 1999). To support the implementation of the Program, ADB also provided advisory TA (Technical Assistance). This TA was divided into several distinct phases linked to certain program milestones. ADB has financed two such phases of advisory TAs. The phase one TA, which was implemented during 1994 and 1995, was a comprehensive study to analyze the sector constraints and prepare a railway reform program. Following Cabinet approval of the TA recommendations in July 1995, the phase two TA commenced in June 1996. The phase two TA, which was largely completed by June 1998, focused on implementation of essential reform measures including:

(i) Organizational restructuring of BR's headquarters and the two zones (east and west);
(ii) Institutional strengthening of the marketing and personnel departments;
(iii) Continued labor rationalization; and
(iv) Freight tariff restructuring along commercial lines.

With support of this TA, BR reorganized its headquarters and introduced a new commercially oriented organizational structure with strengthened marketing and personnel departments. In parallel, the two zones are being restructured; this included continued labor downsizing. The new freight tariff structure, which has already been introduced for some commodities, is being expanded to cover all commodities transported by BR. Many of these reforms, particularly rationalization of the labor force and organizational restructuring, have been politically sensitive, but the continued achievements have confirmed the Government's commitment to reforms.

The Government has recently asked ADB to finance TA to develop a project (or sector development program) to promote subregional rail traffic. In response to the increasing demand for rail transport, ADB's rail strategy emphasizes restructuring BR into a more commercialized and efficient undertaking. The rail strategy stresses development of a harmonized and standardized subregional rail network, offering enhanced freight services and improved access to the poorer areas.

Since the mid-1970s, ADB has been the lead agency in the rail sector and has made four loans totaling $259 million and 14 TAs totaling $3.4 million. ADB has been involved in several TAs with the United Nations Development Programme and with bilateral funding agencies. Bilateral agencies active in the sector include the Canadian International Development Agency, France, Kreditanstalt für Wiederaufbau and Deutsche Gesellschaft für Technische Zusammenarbeit of Germany, and Spain.

The objective of the TA is to help the Government transform BR into a corporate entity, Bangladesh Railway Corporate Entity (BRCE), separate infrastructure from operations; and establish a regulatory and institutional framework, that is appropriate for rail concessions with private sector participation.

To establish an appropriate regulatory and institutional framework for rail concessions, the TA will

(i) Develop an appropriate regulatory and institutional framework, and adequate organizational staffing levels to permit segregation of infrastructure and operations that is appropriate for rail concessions with private sector participation;
(ii) Help the Government and BR implement a series of pilot cases for rail concessions, adopting transparent bidding processes;
(iii) Design an appropriate charging structure and mechanism, and specify rates to be applied by BRCE for track access by third parties;
(iv) Update BR's assets and liabilities assisted by BR staff, and develop an asset register and plan for BRCE;
(v) Specify the required traffic costing and modern accounting systems, and prepare bidding documents for procurement of such systems (hardware and software);
(vi) Redevelop an appropriate tariff system, specify rates and develop charging

structure with rates for the use of infrastructure by third parties.

(vii) Specify the capital structure, financing obligations and prepare balance sheet, profit and loss account and sources and use of funds for BRCE for a ten-year period.

(viii) Assist BR to finalize a micro-manpower study and prepare and assist BR to implement a staff down-sizing program with appropriate counseling, retraining and/or redeployment schemes.

(ix) Develop and detail personnel policies and incentive schemes for BRCE staff.

(x) Assess the impact of improved rail services on the poor people.

(xi) Reassess, and modify, as required, the current scheme for public service obligations (PSO) using traffic costing systems and specifying transitional operating and capital subsidies.

(xii) Assist the Government, as required, in developing and implementing the new institutional and transactions framework and organizational structures and necessary supporting systems.

(xiii) Assist the Government to pass the new legislation required to (a) confirm the reforms already approved through resolution of BR, specifically the division of powers and authority to the Government, Bangladesh Railway Authority, and the Director General of BR; (b) introduce the new regulatory and institutional framework for rail concessions, as per Government recommendations; and (c) establish BRCE as a statutory corporation; and

(xiv) Help BR to finalize a human resource study and implement a staff downsizing program.

3.5.5 Institutional Reform

At present 3 ministries and a large number of parastatals are involved in planning, development, operation and management of the transport sector, without much coordination and adequate assessment as to whether another mode of transport could undertake a particular task more economically and with much less damage to the environment.

For effective coordination and development of an integrated transportation system in the country, all transport related ministries and their parastatals should be brought under one broad based "**Ministry of Transport**". The Cabinet Minister in charge of the Ministry could be assisted by several State Ministers, one each for Roads, Railways, Ports, Shipping and Inland Waterways, and Civil Aviation cum Tourism. There could be several Divisions in the Ministry, one for each sub-sector of transport but coordinated by an official of the rank of Principal Secretary. The Ministry of Transport should set the policies and regulation for the sector, leaving the implementation of those policies to the parastatals and the private sector.

3.5.6 Private Sector Association

BR started private sector association of its commercial and other activities from 1997. As on June 2003, "Commercial Activities' of 42 Mail, Express & Local trains and "On Board Services" of 16 Intercity trains were licensed out. "Computer Seat Reservation and Ticketing System" has been introduced since December 1994 on Build, Operate & Transfer (BOT) basis.

The extra capacity of BR "Fibre Optic Telecom System" has been leased out to Grameen Phone, a private cell phone operator.

Private enterprises have also been associated in the fields of repair of passenger coaches, cleaning of locomotives and passenger carriages and conversion of non-AC coaches into AC coaches on BOT basis. Besides, contractors are being engaged by open competition to accomplish almost all departmental works and purchases.

For the effective and efficient participation of the private sectors in the development process of BR, we recommend the follows:

i) To promote the private sector's involvement in railway transport infrastructure development and management, Government's function as a provider should be reduced while its function, as a facilitating regulator should be increased. To this end, the government needs to develop an institutional framework to create a favorable operating environment for the private sector and at the same time to protect social and environmental interests.

ii) To strengthen Public-Private Partnership (PPP) in the transport infrastructure development and management, further improvements are required in a number of areas to create a more conducive environment. These include:

Improving the legislative and regulatory environment, including the formulation of a BOT law;
Strengthening the capabilities of civil servants;
Eliminating unnecessary bureaucratic procedures and practices;
Marketing the potential of Bangladesh Railway to the international investor community.

3.5.7 Commercialization vs. Privatization

Bangladesh Railway is one of the largest Government organizations of the country. As railway is a very important mode of inland transport, its healthy growth naturally

contributes to the economic development of the country. But BR is handicapped to serve the country effectively as it has been suffering from various operating bottlenecks due to lack of proper government attention and planning. Frankly speaking, the railway system is being operated without any specific direction. It seems, as it were, BR is like a boat without a rudder.

The developing partners i.e. the donor agencies especially World Bank and ADB are campaigning for the corporatization of BR for making it efficient and dynamic. Recently they have suggested the government for a massive reform of BR to make it commercially viable and a competitive transportation organization of the country. They are likely to offer $50 crore to invest in the organizational, structural and operational reform process of BR. This is why; they suggested the Government in respect to:

- Make BR a commercially viable organization;
- Change the existing organizational structure;
- Strengthen BR's efficiency by a substantial rehabilitation process;
- Separate management from operation system;
- Ensure private participation in its operation;
- Integrate with other modes of transport; and finally
- Transfer BR into a Corporate entity

In the name of modernization and commercialization, they are pressurizing the government to turn BR into a corporate entity. They are stressing the need for skill development of BR and its structural reform through privatization saying that this reform is needed to make it a profitable concern.

It is obvious that to strengthen the Chittagong Port, the market-oriented development of BR is very much necessary. Government seeks for the support from the WB and ADB for improving the country's railway network through procurement of new locomotives, carriages, wagons and rehabilitating the main lines and section lines. Although Government is repeatedly speaking for structural reforms and modernization of Bangladesh Railway, but no decision is being taken for a long time for the structural reform of BR. Actually, Government is in a great dilemma as privatization of BR is very difficult and sensitive in context of country's present socio-political scenario. The operation of railway system is heavy costly as it requires huge investment of foreign currency in almost all respects. It is not possible for a local body to operate it privately in our socio-economic context.

Besides, BR is the principal mode of our mass transportation and expected to serve not only as a commercial enterprise, but also as a public utility service. As a public utility service it has a special responsibility to provide transport facilities to the large number of passengers and movement of essential commodities for mass consumption at cheap rate. BR is also required to provide transport facilities in emergent situation like flood, cyclone, draught etc. In addition, the railway has to bear some costs in the matter of

education and medical care of railway employees and their wards, deployment of police forces in railway premises, etc. For this, privatization of BR is highly sensitive to government.

In this context, we stand in favor of reforms but it should be brought about keeping up with the country's socio-economic reality. We believe that BR would firmly stand on its own feet and for that the government should take up a massive program to develop the railway, which has been identified as a thrust sector. Privatization is not the only solution and commercialization does not mean the privatization. BR can be a commercially viable public entity by proper reorientation and efficient management.

3.5.8 Is Privatization a Necessary Pre-requisite to Effective Railway Marketing?

In a word, the answer to this question is *No.* There seems to be a popular misconception that only the private sector can successfully implement marketing systems, policies and strategies - a misconception which may stem from the belief that public sector enterprises have no incentive to operate in a profit maximizing way. Such a belief is quickly being overturned by the modern tendency of governments, including some in the ESCAP region, to require their railway systems to achieve full cost recovery and to engage their senior management personnel under fixed term, incentive based contracts in order to ensure this result.

Indeed, it may be argued that the methods and form of privatization will determine whether privatized railways will have any incentive at all to embrace marketing systems, policies and strategies. If privatization merely results in the transformation of a public monopoly into a private one, then it is unlikely that marketing will assume top priority among the management strategies adopted by the newly privatized railway. In addition, privatization *could* result in a paradox whereby the profit maximizing strategies of a privatized railway actually work against effective marketing of its services. The recent experience of railway privatization in the United Kingdom of Great Britain and Northern Ireland abounds in examples of such paradoxes, owing to the constraints imposed on the new private railway operators by the form of privatization employed.

One such example is that of South Western Trains, one of the 25 passenger rail operating companies recently set up to operate services under a franchise agreement with the United Kingdom government, as part of its railway privatization program. As is the case with the majority of passenger franchises let, the franchise term for South West Trains is only 7 years, meaning that the company is under great pressure from its shareholders to achieve profitability early in the term of its franchise. Since its franchise agreement does not give it full commercial pricing freedom, the company must achieve its profit objectives by reducing the level of its controllable costs, the majority of which are *labor costs*. With this objective in mind, the company in February 1997 made some 70 of its train drivers redundant, with the result that it could

not operate the full timetable required of it by the Office of Rail Franchising and it was obliged to cancel no fewer than 39 trains per day, most of them commuter trains operating during off-peak times. Although it subsequently attempted to restore the faith of its traveling public by offering a *fare holiday*, the damage had been done, simply because the company could not offer the type of product customers (passengers) wanted, which was a frequent rail service *throughout* the day, not just at peak times. Similarly, BR has recently experienced numerous problems in case of several leased out train services, which are operating privately.

By contrast, there are numerous examples of publicly owned railway companies employing very effective marketing strategies to achieve profit or market share-maximizing objectives. In France, the government owned railway organization (S.N.C.F.) has been able to win from the airlines a dominant share of the long distance domestic travel market for its high-speed TGV services. This it has been able to do not solely by offering a superior product, which provided users with highly competitive transit times, but also by packaging its product competitively, in terms of scheduling, pricing and passenger comfort/convenience. In Australia, while employment in the government owned railways dropped by more than 50 per cent (to 57,700 persons) between 1980 and 1995, the volume of freight carried by these railways increased by 69 per cent, despite intensified competition from road transport during this period. While much of this increase may be attributed to the growth in bulk traffic, it also reflects increasing rail penetration of the East Coast inter-capital container haulage market, which the government owned National Rail Corporation serves with fast overnight intermodal services, running at near passenger speeds and priced competitively to attract traffic from the interstate highways.

While railway privatization strategies as a means of eliminating railway financial deficits are currently in vogue throughout the region and elsewhere, it is important to note that privatization may not always provide appropriate solution to this problem, particularly when governments remain committed to the continuation of unprofitable services, as a social responsibility. It is important also that the issues of managerial efficiency and ownership of railways should not be confused. Railways can be, and are being, commercialized under public ownership, and the adoption of a marketing culture is an essential part of this process.

3.5.9 Recent Development In BR

To date the ongoing railway reform program has had a positive impact on BR's operational and financial performance. The overall objective-to reduce the deficit and ensure that BR breaks even against working expenses-has been achieved. BR’s deteriorating financial performance has been halted and reversed, partly due to the successful implementation of the major staff retrenchment program. Thus, BR has maintained a working ratio of less than one, which is acceptable but needs to be sustained over the medium term. In addition, several of BR’s operating indicators,

particularly freight performance and staff productivity, show an improving trend.

While positive developments have taken place in the rail sector, BR's financial and operational performance must be sustained over the medium term. The Government is committed to transforming BR into a corporate entity. The Government also intends to mobilize private sector participation, specifically for rail operations and noncore activities, such as maintenance of rolling stock. Thus, as the next step in railway reform over the medium term, the Government aims to restructure BR along commercial lines by separating operations from infrastructure and introducing rail concessions with private sector participation. This approach follows best practices adopted in other countries. Worldwide experience in rail concession schemes, for example, as implemented in Argentina, Brazil, and Sweden, and lately being introduced in Pakistan, shows significant benefits in terms of mobilization of private investment capital, reduced budget outlays, operational efficiency, and better use of national resources. However, because of the complexity and the long-term nature of the rail reform program, the Government needs to develop a regulatory and institutional framework that is suitable for rail concessions.

3.5.10 Action Programs and Priority Investment

Bangladesh Railway is a unique transportation agency of the country. It has lost its glorious past due to lack of proper attention of Government. Being truncated from the main system BR inherited a number of structural and physical weaknesses as it was not specially designed and constructed to serve Bangladesh. So, special attention will be given to strengthen its network by proper reorientation. At first detailed survey will be conducted considering the socio-economic condition off the country and then short-term as well as long-term plans will be made for the healthy growth of railway. Projects will be taken considering their viability and priority. Govt. has to play the central role in this respect. Donor agencies should be encouraged to invest in different reform processes on the basis of BOT (Build Operate & Transfer) or BOO (Build Operate & Own)- or any other suitable means that is viable to us.

Analyzing the existing railway network in the light of different surveys and suggestions conducted by different agencies (local and foreign), the following steps can easily reduce the inherited physical, structural, managerial and operational problems of BR to a great extent:

1. Constructing of double-lines (alternate line to use as separate up & down line) in all-important sections of BR such as in Dhaka-Chittagong, Dhaka-Sylhet etc.
2. Constructing chord line between Dhaka-Laksam to reduce rail-road distance between Dhaka and Chittagong as well as with the Chittagong Port.
3. Completing urgently the on-going conversion program of existing MG line to DG line between Dhaka-Joydebpur to connect Northern part of

the country with the capital city.

4 Constructing direct link between Jamtoil (Serajganj) and Bogra to reduce the distance between Dhaka and the northern districts so that optimum utilization of the capacity of Jamuna Multipurpose Bridge (JMB) Railway Link Project is ensured.
5 Completing the running construction work of Akhaura bypass to reduce the travel time between Dhaka and Sylhet and the Tarakandi-Voapur link route to promote the efficiency of JMB.
6 Constructing Cox's Bazar connecting line from Dohazari to facilitate the growth of tourism facilities as well as an advanced step for connecting railway network with Myanmar as a missing link of proposed Trans-Asian-Railway link project.
7 Providing rail line over proposed Padma Bridge to connect the Mongla Port with eastern zone. `
8 Constructing underground railway or light monorail system to provide mass transport facilities in the capital city Dhaka to eliminate unbearable traffic congestion of the city.
9 Opening and extending existing lines/corridors with India to promote regional as well as international business and to make a pre-ground for the long cherished dream of Trans-Asian Railway Network.
10 Strengthening the capacity and productivity of different departments of the organization.
11 Increasing the productivity of railway workshops by modernizing and skilled development.
12 Rehabilitation of branch lines and modernization of signaling & interlocking systems of different stations to make BR more efficient and functioning.
13 Replacing life expired locomotives and carriages by urgent procurement of new ones for smooth operation and improved services.
14 Constructing all missing links of different sections.
15 Ensuring the proper utilization of railway lands and assets.
16 Enhancing private participation in operation system.
17 Completing of Jamuna Railway Link Project.
18 Undertaking the rehabilitation and maintenance of core network of Railway, including signaling and telecommunication systems
19 Improving the container services and expansion and modernization of container handling facilities at sea-ports and ICD
20 Developing a new cargo-cum-general container composite port at Dhaka, and inland Railway container depots at Dhaka, Tongi and Joydevpur
21 Ensuring the integrated planning of railway in association with roads and ports to the end of regional and sub-regional co- operation.

3.6 PROSPECTS OF BANGLADESH RAILWAY

3.6.1 Projected Benefits

Benefits of a transport project has several components such as benefits from reduction in vehicle operating cost, facilities maintenance costs, benefits from reduction in accident as well as benefits from travel time savings etc. It is obvious that many benefits result from transportation improvement or, to put it more broadly, from improved transportation facilities. Some of these benefits are direct and readily apparent that result from a reduction in user costs; others are indirect including benefits to adjacent property and to general public and more difficult of discernment. Likewise, some benefits may be readily evaluated in terms of money; others defy evaluation in this fashion, although they are nonetheless as real and lasting as monetary returns. The most quantifiable and, to the analysis, the most significant benefits are those that result from a reduction in user costs. Such benefits result from decreased operating costs, higher operating speeds, fewer delays decreased accident losses and socio-economic development. Usually the imputed value of savings in time (especially for the developed countries) is the most dominate component of the benefits of transportation.

The tangible benefits from the reorientation of BR is expected to be obtained from the savings in operating costs, earning more from high traffic volume, efficient operation and proper utilization of railway assets. Moreover, a tremendous development will be occurred in carrying bulk commodities to a longer distance.

The main benefits that may be observed from the reorientation of Bangladesh Railway are summarized as follows:

1. Integration of Railway's east (MG) and West (mostly BG) networks, allowing direct east-west traffic, will create new dimensions to increase BR's efficiency.
2. Direct access between north and southeast of Bangladesh and the capital city Dhaka to the Port city Chittagong will open new doors for BR to carry both passengers and freight traffic to a longer distance.
3. It will be a closure of missing links for future Trans-Asian Railway route.
4. Enhancement of regional rail traffic will increase the revenue of BR.
5. A great development will be observed in the handling of container services from Chittagong Port to a longer distance that will promote the Export-Import business of the country.
6. Transportation projects generally result in travel time saving, which are enjoyed by passengers, crew of vehicles, vehicle operations and consigners of commodities. The proposed direct links will significantly reduce the rail distance between important sections and reduce the travel time.
7. Apart from saving in travel time, there will be significant reductions in the vehicle operating costs as well.
8. A new area will be opened for railway traffic and for reduction in travel time, more traffic will be attracted by the structural reorientation and thus BR will be

able to increase its revenue.

9. BR will be able to improve its operating performance and thus will be more competitive compared to other modes of transportation.
10. New links will provide a better transport facility for bulk commodities and container services to carry faster to the Northwest region of the country over the Jamuna Multi-purpose Bridge.
11. In case of any emergency, accident or natural calamity like flood, cyclone etc., a second line of communication via the Chord line between Dhaka and Chittagong is extremely necessary to maintain uninterrupted rail communication between these two most important cities of the country.
12. The construction of the vital link is essential for the reason to increase the transportation potentials to obtain maximum profit.

3.6.2 Bangladesh's Potential To Be Transport Hub

In view of its unique geographical location, Bangladesh could become the "transport hub" to serve the entire hinterland comprising Nepal, Bhutan and North-East India. Bangladesh should try to provide transport services to the sub-region as a "trade in services" and as a potentially important source of foreign exchange earning. Accordingly, future development strategies should include a regional role for the national transport system. Future actions concerning the appropriate modal mix and integration of different modes should also reflect this regional role of the transport system. To promote Bangladesh as the transport hub for the sub-region, it shall have to modernize and expand its port capacity, railway and road network, where the private sector should be encouraged to invest. BR can immediately take this opportunity by improving its existing network and extending services by opening its corridors for Indian traffic on the basis of appropriate bargaining.

3.6.3 JMB Railway Link

At this critical juncture when the very existence of BR was at a question mark, the concept of Jamuna Bridge Railway Link Project appeared as a blessing and the golden ray of prospect started glittering in the horizon. The opening of the railway built across the Jamuna Multipurpose Bridge (JMB) is a landmark event for the Bangladesh Railway as well as for the country. With the opening of this connection, BR's MG networks of the east of Jamuna River and BG networks on the west have been successfully integrated by DG lines. This is an important milestone and a step towards further expanding and integrating the operation of BR with the sub-regional rail transport network. With its advantageous geographical location, BR has the potential to become the hub of commercial rail traffic movement in this region. Converting the existing MG into DG lines between Dhaka and Joydebpur will obviously enhance the potentiality of BR.

This link has removed a severe bottleneck at the Jamuna river where people and goods

presently cross the river by ferry, getting off the train on one side and embarking on another train on the other side. This project has integrated the gauges of existing railway lines and built a new 99 km dual gauge line from Jamtoil to Joydebpur on the outskirts of the capital, Dhaka, so that passengers and goods cross the river by train without interruption.

The project is expected to generate a substantial volume of new freight traffic, including that of the coal and hard rock mines in the region. An important part of the project is streamlining Bangladesh Railway, the executing agency, to make it more efficient and cost-effective. Ultimately, the project will also help develop a potential sub-regional growth area that includes parts of India, Bangladesh, Nepal and Bhutan.

3.6.4 Dhaka-Chittagong Chord Rail

At present, Dhaka, with the population of 14.0 million, is the capital city of Bangladesh, and has the control of the nation's politics and economy. While Chittagong, having 5.0 million population, is facilitated with the nation's commercial capital and is the most advanced industrialized area and the principal sea port of the country. Thus, the south-eastern districts, between the two largest cities of the country, is densely populated and is forming the nation's most productive area. This is why Dhaka-Chittagong corridor appears to be the most important one in terms of flow of passengers and freight traffic in the country. It is expected that in 2015, 134 million (46.05% of the total country) passenger traffic and 42 million tons freight will move in this corridor. Moreover, as more than 75% foreign trade of the country is performed by Chittagong port, this corridor has utmost importance in the context of Bangladesh transport. Thus, the Dhaka-Chittagong corridor is the most important one and so called ***"life-line"*** of the country for the economic growth of Bangladesh.

The Dhaka-Chittagong corridor is served by road, rail and water transport (inland transportation system) mainly dominated by road transport. It is evident that the present transport facilities will not be able to bear such expected heavy traffic in near future. This is why government has to build more transport facilities in this region. Besides, the present rail link between Dhaka and Chittagong is not straight one; rather it has huge rounding loop in between Dhaka and Laksam.

The existing railroad distance between Dhaka-Chittagong is 320.79 kilometers. The link between Chittagong-Laksam is almost straight and it is 129.60 kilometers. The rail-road distance between Dhaka-Laksam is 191.19 kilometers with a huge rounding loop of about 90 kilometers and thus railway services between Dhaka-Chittagong is time consuming and less attractive. The proposed link (chord line) will reduce about 90 kms route distance in between Dhaka and Laksam as well as Dhaka and Chittagong. It is being proposed to construct a new connecting line between Dhaka and Laksam. The existing Dhaka-Narayanganj line should be doubled. This proposed link will be able to provide a 230 kms route distance in between Dhaka-Chittagong by

rail whereas the road distance is 264 kms. Thus the rail transport may be more competitive with road and more cost & time effective to all.

3.6.5 Chittagong-Cox's Bazar Link

Chittagong is the commercial capital having principal sea Port and Cox's Bazar is the main and unique tourist spot of the country. A railway direct link of about 100 kms can asily make a bridge of strong communication network between these two major cities. This link will not only a viable project for Bangladesh Railway, but also will open a new door for our tourism industry. Besides, this link will be a future step of Tarns-Asian Railway network through Myanmar.

3.6.6 JMB-Bogra Direct Lick

Underdeveloped Northern part of the country presently is connected with capital city Dhaka by MG trains directly over the JMB Railway Link route. BG train services will be establishments soon immediately after the completion of the on-going conversion of Dhaka-Joydebpur MG section to Dual Gauge (DG). Moreover, a new link from the eastern side of Jamuna Bridge to Tarakandi is under construction. Construction of rail link from western side of Jamuna Bridge to Bogra is under consideration in the current Three Year Rolling Investment Program (2004-2006). If this link is constructed, railway will get momentum in direct communication between the Eastern & the Northern districts of Bangladesh through Bogra using the facilities of JMB saving travel time.

3.6.7 Trans-Asian Railway Route

As part of the step-by-step approach to the implementation of the integrated Asian Land Transport Infrastructure Development (ALTID) project, the ESCAP secretariat undertook in 1995 a preliminary Trans-Asian Railway (TAR) route requirements study for connecting the rail networks in the SAARC region - Pakistan, India, Sri Lanka and Bangladesh, with connections to Nepal - and the Islamic Republic of Iran, to create a "TAR Southern Corridor".

The objective of the TAR project, initiated by ESCAP in the 1960s, is to assist in providing a basic rail link between Singapore (Indonesia was included at a later stage) and Istanbul, which would also provide a connection between Asia and Europe/Africa. The main direct route connecting Singapore with Istanbul is 14,000-km long. Currently, the total length of missing links is around 1950 km, comprised of 1400 km between Bangladesh and Thailand and 450 km in the Islamic Republic of Iran between Kerman and Zahedan. Consequently, the total new construction work is approximately 14% of the direct route. As Bangladesh is in a geographical important location of the TAR route network with its prospective Sea Port (Chittagong Port), BR

can be appeared as an indispensable part of future socio-economic activities of this region by taking steps accordingly.

3.6.8 Container Services

BR has recently entered into a new era in transportation of freight traffic in containers from Chittagong to Dhaka. Exclusive container train was introduced on 5th August 1991. Since then, volume of container traffic gained momentum. During the year 2000-03, a total of 61,026 nos. of containers (only 23% of total containers handled at the port) were handled at Chittagong Port and Dhaka ICD, which carried 447,688 tones of different commodities and contributed a total of Tk. 32,00,57,726 to the Railway revenue (25% of total freight earnings). In 2003-04 BR handled 70,247 containers, which carried 541,963 tons of different commodities and contributed a total of Tk. 374,441,891 to the railway revenue. It covers 27.87% of total freight earning of that year and it is 17% higher than that of the previous year. Presently BR is carrying only about 20-23% of total containers handled at Chittagong Port, which are destined for Dhaka, the rest are currently de-stuffed and carried by road. BR can increase its share by improving its capacity & service quality and thus it has a bright opportunity to increase its revenue by handling more containers covering west zone over JMB through DG Link route.

CHAPTER IV

MARKETING IN RAILWAY SECTOR

4.1 Overview

Bangladesh Railway is one of the largest Government enterprises in the country, playing a vital role in the socio-economic development and industrialization of the country. BR is expected to serve both as a commercial enterprise and as a public utility service. As a commercial enterprise, BR has an obligation to generate sufficient revenue to meet its cost and as a public utility service it has a special responsibility to provide transport facilities to the large number of passengers and movement of essential commodities for mass consumption. BR is also required to provide transport facilities in emergent situation like flood, cyclone, draught etc. In addition, the railway has to bear some costs in the matter of education and medical care of railway employees and their wards, deployment of police forces in railway premises, etc.

BR is the principal mode of transportation in the country. With the development of road transport facilities there has been a shift in the trend of passenger traffic with short distance passenger preferring road transport, because of their frequent and point-to-point services. In spite of this, during 2002-2003, Bangladesh Railway transported about 43 million passengers against about 41 million during 2001-2002. In order to render better services to the passengers, BR introduced intercity train services in 1985. At present there are 52 nos. of intercity trains running. Around 41% of the total passengers of BR are being carried by the Intercity trains which contribute approximately 75.5% of the total earning of passenger traffic.

The railway has been facing tough competition with other modes of transport for the high rated traffic, which pay more revenue. On the other hand, the railway is called upon to carry traditional low rated essential such as food grains, fertilizer, coal, stone, petroleum, salt, sugar etc. as a national carrier to the remote corners of the country.

To make Bangladesh Railway a profit-driven and market-oriented commercial organization, the adaptation of a market-led philosophy by BR is utmost important. It requires a fundamental shift in its driving philosophy and hence the adaptation of a marketing culture, systems and practices in BR is an indispensable part of this process. In this connection, the *Marketing Objectives of BR* must be:

- *practical and realistic* - i.e. capable of being achieved within the likely resource limitations facing the railway
- *linked to overall Corporate Objectives;* and **most** importantly

- *relevant and responsive to the actual needs of customers*

Marketing objectives must reflect the principal thrusts of the Corporate Plan.

4.2 The "Marketing Mix", or the Seven P's

There is still a popular misconception that the term "marketing" is interchangeable with "sales" and "advertising". That is only partly true. In fact, marketing includes the full range of activities needed to achieve voluntary and ***profitable*** exchanges of products or services between two parties. These activities are aimed at changing one or more of four variables known as the ***Marketing Mix,*** with the intention of improving the organization's profitability. These variables, also known as the ***Seven P's***, are Product, Price, Promotion, Place, People, Processes and Physical Evidence. It is useful to describe each of these variables in terms of their meaning in a *railway-marketing* environment.

❖ Product

For railways, this is the service offered to customers, both existing and prospective. However, the term also implies some notion of the *attributes* of a service - its basic design, or its essential features; its presentation, or how it is packaged; its associated support level (which is usually related to the capacity of the organization to deliver an acceptable standard of support for the product, or service); and its branding, or its association with a particular image or identity.

The core products of railway organizations are *transportation services*, but increasingly railway organizations are diversifying their activities in fields, which are not wholly related to their core business, such as commercial property, or real estate, development. The product descriptions covered here are, however, related to the core business of railways, since it is these core businesses, which in the past have suffered most from the absence of systematic marketing techniques and which in the future stand to benefit most from their application.

For a *railway passenger service*, the design and presentation characteristics of the product are generally: the route covered; the service frequency; the achieved transit time (or interval between departure and arrival); the carriage seating standard and configuration; the decor, cleanliness and riding comfort of the rolling stock; the nature and standard of meals provided enroute; the comfort, cleanliness and convenience of station or terminal facilities; and the convenience of connections with other rail services or with other transport modes.

For a railway freight service, the design and presentation characteristics of the product are generally: the route covered; the service frequency; the operational reliability of the service (e.g. adherence to scheduled transit time, etc); the security provided for consignments (e.g. against pilferage and damage); the convenience and efficiency of loading/unloading facilities at rail freight terminals; and the availability of a convenient delivery service to the final destination (i.e. door-door delivery service).

❖ **Price**

This denotes the published or negotiated value of the exchange transaction for a product or service. It should be noted that price must represent value to both parties - to the producer or service provider in terms of the profit margin yielded and to customers in terms of the value for money derived from consumption of the commodity or service.

For a *railway passenger service*, the price of the service, or the fare, paid by passengers is usually graduated by distance - the longer the distance traveled, the lower the charge per kilometer - although often the charges are broad banded within intervals of distance, e.g. one charge for 0-30 km; another (lesser) charge for 31-70 km, and so on. In addition, fare rates usually vary with the standard of service used - for example, a first class seat might cost more than double a third class seat, while a deluxe sleeping berth might cost fifty per cent more than a deluxe seat, etc.

In some cases, governments control the maximum level of fares charged for different categories of service, while railway organizations have the ability to discount fares below these maximal, in order to generate more business or to modify demand in some way, e.g. by transferring demand from heavy to light traffic periods. Discounts may be provided for: ticket bulk purchases (e.g. weekly, monthly, yearly tickets); off-peak travel (time of day or seasonal); group travel and tours; student/old age pensioner/other pensioner travel. In a small number of cases, railway organizations have the ability both to adjust the maximum level of passenger fares and to offer discounts off these fares.

For a *railway freight service*, the price or tariff to be paid by customers for the transport of their consignments is usually expressed as a rate per tone-km, although freight tariffs can also include charges for other services rendered by the railway, such as the loading/unloading of freight consignments, in which case the charging unit will be different, e.g. tones loaded or unloaded. In common with passenger charges, unit freight rates usually decline with the increase of distance, but as in the case of passenger charges may also be broad banded within distance intervals.

Unlike passenger tariffs, which are almost without exception published charges, freight charges may be either published or negotiated rates. If they are published rates, they will generally appear in the railway organization’s standard schedule of charges, and will be available to all customers. If they are the result of a process of commercial

negotiations between the railway organization and individual customers, or groups of customers, they will generally be incorporated in long term haulage contracts between the two parties, and will not generally be disclosed to other parties. By definition, negotiated rates will be available only to the contracting customers, subject to their agreeing to meet certain other contractual conditions.

Freight tariffs are less likely to be subject to control by government than passenger tariffs, yet government imposed ceilings on published freight tariffs are not uncommon throughout the region. In most cases, railway organizations have the ability to offer discounts off the level of freight tariffs in order to expand business, and in a majority of cases they also have the ability to increase the level of freight tariffs in order to recover cost increases.

❖ Promotion

This is the result of all activities aimed at enhancing customer awareness of, and stimulating demand for, products or services. Typically, these activities include: advertising in all of its forms (point-of-sale, direct mailing, print media and broadcast media); sales force representation; and PR (public relations).

In the context of railway marketing, promotional techniques are becoming more widely used for passenger business, but are as yet relatively little used in the case of freight business. Of the different forms of promotion, *sales representation* has been the most widely used in railway business. However, railway sales forces have mainly had a passive or reactive, rather than a proactive, role, servicing existing customers rather than seeking out and securing new customers, order taking rather than order generating. Furthermore, these sales forces have not been organized in a way which would assist them to actively promote railway services and secure new business. Only a relatively few railway organizations have encouraged *market segment specialization* by their sales personnel, with the result that most railway sales forces have not been able to develop the specialized knowledge of individual market segments needed to be able to effectively sell railway services to these segments. The lack of specialization is, particularly, evident in passenger marketing cells, where all too often sales force activity has no specific focus of any sort. Indeed in Bangladesh Railway like many other railway systems of this region, there is no passenger sales force at all and selling activity is confined to ticketing or reservations offices, which in reality have an “order taking” function.

There is now clearly an urgent need to focus railway sales force activity on individual market segments and at the same time to ensure that this activity is fully co-ordinated with other forms of promotional activity, such as advertising.

The reticence of railway managements in the recent past to commit to the development of co-ordinated promotional campaigns for their core transportation business is partly explained by budget limitations and some degree of skepticism that

promotion can be effective in increasing the volume of this business. Increasing competition (particularly from road passenger and freight transport operators), will however dictate a change in this attitude. Railway managements can be expected in future to allocate an increasing proportion of their operating budgets to promotion. At the same time, they can be expected to employ more sophisticated techniques (such as on-board passenger sample surveys) to measure the effectiveness and reach of their promotional campaigns, in order to maximize the value of future campaigns.

- **Place**

"Place" means not just the locations of producer facilities, but the locations of all points of sale at which customers may have access to the product or service. In the case of railways, these will include not only passenger stations and freight terminals, but corporate/regional/divisional headquarters, centralized railway reservations offices, hotels, travel agents, and freight forwarders' offices and terminals.

In the wider sense, "place" will mean channels of distribution for the product. Outside of the railway organization itself, the most effective channels of distribution for the railway "product" are likely to be travel agents in the case of rail passenger services and freight forwarders, in the case of rail freight services. The main advantage of using external channels of distribution is that business volume can be maximized through a relatively small number of direct customers, who act as wholesalers, on-selling space on trains to a much larger group of final consumers, accepting the credit and business risk and arranging storage and feeder transport (to/from railheads), where required. By directing a greater proportion of their business through such "wholesalers", railway managements can often achieve significant reductions in their operating costs, with commensurate improvements in the overall corporate financial result.

- **People**

It almost goes without saying that people are a railway organization's most important resource. So it is that a railway's people resources will be vitally important to the realization of its marketing goals. It will not matter how advanced and sophisticated are a railway organization's management systems if the railway's existing and potential customers do not feel that railway staff are listening and responding to their needs.
What is required, therefore, is *total customer awareness* from the very top to the lowest levels of staff in the railway organization. Inevitably, this in turn will require that a customer awareness culture be instilled throughout the railway organization by its senior management, who in most cases must first make the mental transition themselves, or be prepared to be swept aside by personnel who already have.

- **Processes**

Railway processes, especially operational processes, have evolved over the 170-year history of the development of the railway as a common transport mode. In many instances these processes have changed in response to the development of competing transport modes, especially road transport. An example of change spurred on by the increasing availability of door to door services provided by road transport has been the demise of the collection and re-marshalling of casual wagons from private sidings and its replacement by the operation of block trains between intermodal terminals.

What is important is that the processes must be compatible with serving the needs of railway customers. If a customer requires regular and frequent dispatch of his loading on scheduled fast freight trains, then a railway's policy of operating infrequent, slower and longer trains will obviously be incompatible with these needs and the railway must be prepared to change its process accordingly. The process in effect is an integral part of the railway's delivery of its product (i.e. service) and will have a crucial role in determining whether in the end the product will satisfy customers.

❖ **Physical Evidence**

Physical Evidence refers to the physical evidence available to customers in the layout and presentation of railway facilities that their needs are actually being met. The design, layout and signage of passenger stations, for example, must be such as to convey the impression to travelers that the railway really wants their business. This it will do by ensuring that platforms, concourses, ticket/reservations offices, waiting rooms, toilets, baggage lockers, bus interchange and transfer facilities, etc, will be comfortable and convenient for *all* categories of travelers to use. These facilities also have a critical influence on customer acceptance of the railway product.

4.3 Marketing Management Process in a Railway Environment

Marketing seeks to improve corporate profitability by modifying the Marketing Mix, consisting of the four variables, the ***Seven P's***, just described, in order to satisfy customer wants and needs. Clearly, units of the organization other than the Marketing or Commercial department will also have an important "Marketing" role. In the case of railways, those departments with a primary role in service delivery - mainly the Operations, Mechanical Engineering and Civil Engineering Departments - can crucially affect the quality and other characteristics of the Seven P's, and hence will have an important influence on the marketability of the railway product. However, it is the Marketing or Commercial Department which must take primary responsibility for translating the needs of customers into service requirements which it must then communicate to the service providers, and for ensuring that the delivery of services satisfies customer needs.

Figure 4-1 illustrates the main factors influencing the process of Marketing Management in any commercial organization. The single most important factor is the wants and needs of the organization's target customers, and hence these are shown at the epicenter of the diagram. The wants and needs of the target customers determine the specifications of the marketing mix, which is embodied in the Marketing Management System (comprising systems of Marketing Planning, Organization/Implementation and Control), as illustrated in the third innermost ring of the diagram. However, Marketing Management in developing a strategy to satisfy the needs of its target market must also adapt to a *microenvironment,* as shown at the corners of the rectangle in the diagram, consisting of marketing intermediaries (or distribution channels), suppliers, competitors and publics (including stakeholders). It must further adapt to a *macro-environment*, shown at the outer extremities of the diagram, consisting of demographic and economic forces, political and legal forces, technological/physical forces, and social and cultural forces. Thus, Marketing Management must take into account all of the actors and forces in the marketing environment in developing its strategy to serve the target market. This applies as much in the case of a large global corporation as it does in the case of a small domestic business, and within this range certainly applies to railway organizations.

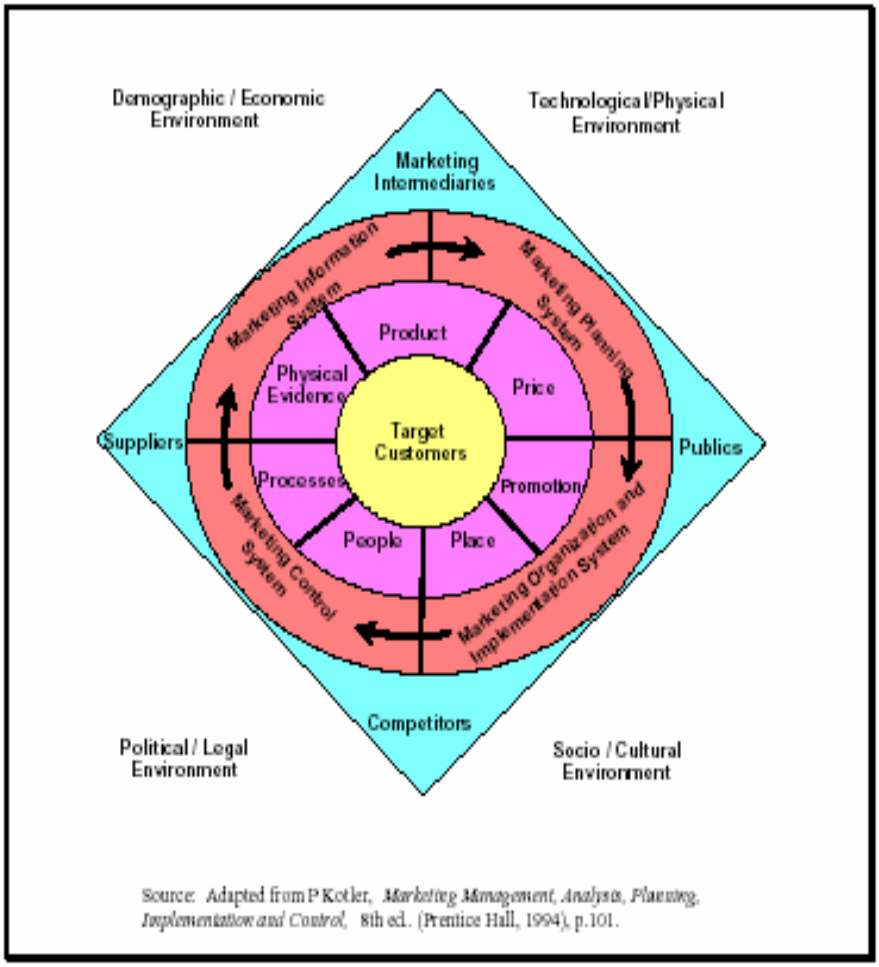


Figure 4-1: Influences on Marketing Management

4.4 Why Do Railways Need Marketing?

It is an undeniable fact that railways worldwide are facing unprecedented competition from other transport modes, particularly from road transport. More than ever before, railways are being exposed to market forces and associated competitive pressures, which threaten their long-term survival. Their capacity to respond effectively to these forces depends mainly on their ability to transform themselves from the non-profit making agencies of government, which they have historically been, into vibrant, profit driven and market oriented commercial enterprises.

This transformation requires, among other things, a fundamental shift in the driving philosophy of railway organizations and their adoption of a marketing culture, systems and practices is a vital part of this process. ***It also requires a major change in the attitude and expectations of governments with respect to the future role of their railway organizations.*** There is a basic contradiction between requiring railways, on

the one hand, to become commercial organizations, and on the other to continue, without explicit subsidy, the provision of loss making "welfare significant" services.

Among the more compelling reasons for the adoption of a market-led philosophy by railway organizations is the requirement, now increasingly being imposed on them by their owning governments, to reverse the declining trend in their net financial results. Closely linked with this requirement is the need for railway organizations to be able to respond effectively to competition which could, if allowed to go unchecked, drive down their net financial results to levels which would be politically unsustainable and might therefore lead to their demise. In this context, this section outlines the recent experience of some railway organizations of the ESCAP region.

4.4.1 Reversal of Poor Financial Performance

According to ESCAP: Guidelines for Development of Railway Marketing Systems and Procedures, very few of the region's railway organizations currently generate sufficient revenue from their core transportation businesses to cover their operating expenses, and practically none of the region's railway organizations generates a sufficient gross operating margin above the level of its operating expenses to provide for the renewal of its assets. Yet the governments of the region now demonstrate a tendency towards withdrawal of financial support for railways.

(a) General Statement of the Problem

The dilemma faced by Bangladesh Railway like most of the railway organizations of the region, and of the world for that matter, is best understood by reference to what might be termed "*the vicious circle of **railway** under funding*". Figure 4-2 illustrates how this vicious circle works.

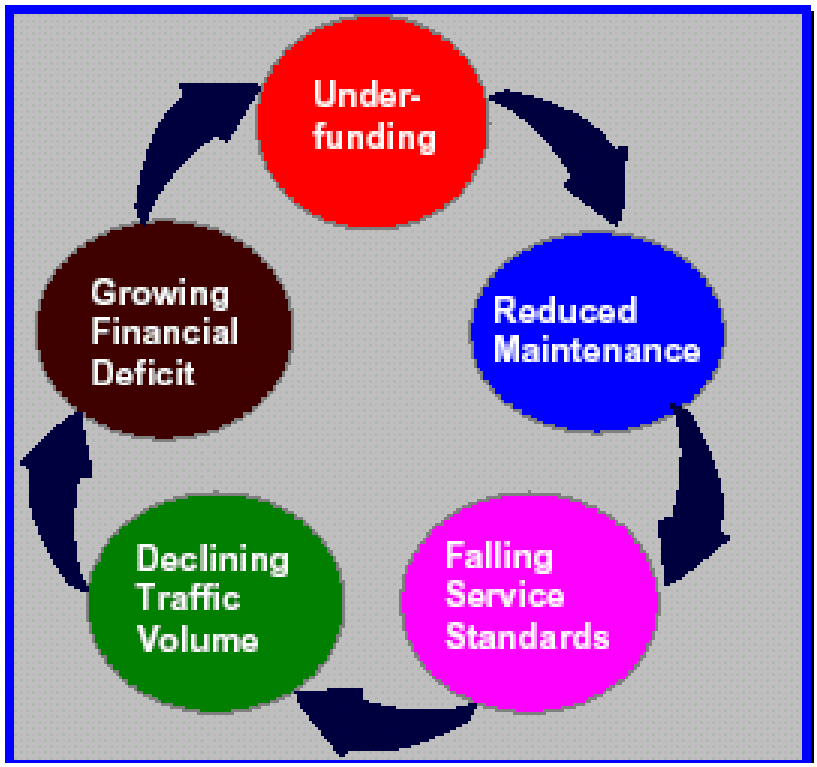


Figure 4-2: Vicious circle of Railway Underfunding

A widening negative gap between operating costs and revenues such as that experienced by a majority of the region's railway systems can lead (and often has led) to a situation in which governments reduce the level of funding available to their rail systems for the maintenance of their track infrastructure and vehicle fleets at a level compatible with the provision of a safe, efficient, reliable and competitive transport service. This in turn leads to a deterioration in the condition of track, bridges, signaling systems, and of locomotive and rolling stock fleets, resulting in high rates of equipment failure and the imposition of increasingly stringent speed restrictions on track and bridges, in order to arrest the decline in physical standards. The market response to falling standards of service is a withdrawal of business and reduced traffic volume, leading successively to: *declining revenue; further widening of the financial deficit;* and *further reductions in the railway budget*. In this way, the *vicious circle* is completed.

The problem of the non-availability of funds to support an acceptable level of maintenance (which might be perceived to be the root cause of the vicious circle) is often compounded by *capital starvation*, particularly of funds for railway capacity expansion projects, the majority of which may be economically justified by comparison with alternative investment in less environmentally friendly transport modes.

(b) The Problem as Experienced by Railways of the Region

In 1995 the ESCAP missions reviewed the profitability of some 16 railway systems of the Asia-Pacific region, out of a total of some 30, which indicated that only five of these systems generated sufficient revenue to cover their operating costs, and one of these five was able to achieve an operating surplus only after the inclusion of profits made on its real estate transactions.

For the study of railway marketing they analyzed eight railway organizations of this region - Bangladesh, India, Indonesia, Mongolia, Pakistan, Sri Lanka, Thailand and Viet Nam (and as a ninth railway organization, the Malaysian railway). Of the eight railway organizations for which financial data were reviewed, only two, India and Mongolia, achieved an operating surplus (excess of revenue over operating costs), yet in both cases it can be, and is, argued that this achieved surplus is insufficient to provide for an adequate rate of asset renewal to sustain investments in the capacity expansion projects needed to maintain market share, and to permit replacement of life expired assets at an acceptable rate.

The remaining six railway organizations do not generate sufficient revenue to cover even their working expenses and hence are wholly reliant on government financial support for asset renewal. Data of the Malaysian Railway suggest that the level of cost recovery for that system stands at 107 per cent after an allowance for depreciation and at 120 per cent without but the profitability of the railway was heavily dependent on its non-core business.

The inverse relationship between level of cost recovery and the share of passenger traffic in the total traffic task is borne out in the case of 6 of the 8 railways reviewed, India and Viet Nam providing the two exceptions. In the case of India, while passenger traffic accounts for more than half the total rail traffic units, the revenue generated by the railway exceeds the level of operating costs by almost 40 per cent. In fact, the results for India obscure the reality that there is a substantial cross subsidy between freight and passenger traffic.

In the case of Viet Nam, the reverse applies, in that passenger traffic comprises less than half of the total traffic units, yet overall cost recovery stands at slightly less than 100 per cent. The results for Viet Nam reflect poor profit performance in both the passenger and freight traffic sectors. This has been a result of the recent transformation of the national economy from central control to market direction and the consequent exposure of the railway to virulent price and service competition (especially from road transport), where previously it had been shielded from such competition. Thus far, the railway has been unable to respond effectively to this competition, in either of the core transportation sectors. The railway has been unable to shed costs at a rate compatible with the loss of traffic, and this coupled with an

inability either to increase its transportation charges owing to competitive pressures, has resulted in a deterioration in its cost recovery performance over this period.

(c) How can application of marketing techniques improve railway profitability?

An answer to this question lies in the fact that individual railway traffics or traffic segments are *not* uniform in terms of their contribution or potential contribution to full cost recovery. That this is so is well illustrated by the experience of India. Financial contributions (i.e. revenue less attributable costs) are calculated annually for 7 passenger traffic segments and nearly 250 freight commodities carried by the Indian Railways.

In 1993-94, while the passenger traffic sector overall generated sufficient revenue to cover only 77.5% of its attributable cost, three passenger traffic segments achieved at least full cost recovery. These were the Air-conditioned Class, Air-conditioned Sleeper and Air-conditioned Chair Car segments, with cost recovery percentages of 121.3%, 148.3%, and 105.6%, respectively. The worst contributor was the Ordinary Second Class segment which is strictly fare controlled and for which collected revenue recovered only 44.8% of attributable cost. In the case of the top 7 freight commodities, cost recovery overall was 164.5%. For individual commodities, it ranged from 321.6%, for Iron and Steel, to 111.2%, for Food Grains (the latter being subject to tariff regulation in some areas).

The success of the railway in being able to lift the level of overall cost recovery, within the constraints imposed on revenue generation by government policy, thus depends on its ability to:

(i) ***Actively market*** those individual traffics or traffic segments which can be identified as profit contributors;

(ii) ***Enhance operational efficiency*** in the case of individual traffics or traffic segments which have the potential to offer improved financial returns;

(iii) ***De-market*** those traffics or traffic segments, which can be identified as chronic loss contributors, and *from which it is possible for the* ***railway*** *system to withdraw;*

(iv) ***Quarantine and seek direct compensation for*** those traffics or traffic segments which can be identified as chronic loss contributors, but from which, owing to government policy, *it is not possible for the* ***railway*** *system to withdraw.*

The conventional view that marketing is concerned with growth, rather than with contraction, has to be overturned if marketing techniques are to succeed in improving corporate profitability. Marketing is, after all, nothing more than a systematic management tool aimed at identifying and manipulating the factors, which will contribute most to profit growth. This may be achieved as much through a process of

strategic contraction, as through the promotion of growth. However, it has to be emphasized that strategic withdrawal from individual loss-making traffics should be contemplated only if the revenue generated by those traffics is insufficient to cover their direct operating or incremental costs and then only after all possibilities for coordination with other modes for their handling have been fully explored.

In the railway environment, de-marketing strategies have been applied in order to achieve a withdrawal from unprofitable freight traffic segments, such as short-haul less-than-carload freight traffic. India and (to some extent) Malaysia have applied punitive freight rates to discourage this business. In the case of longer haul LCL traffic, the second strategy (improvement of operational efficiency) has been applied by providing freight rate incentives to LCL customers in order to encourage them to containerize their freight consignments. *[Such strategies, however, should be applied with caution and with due regard to the needs and business interests of customers.]*.

Finally, the marketing concept also embraces the quarantining, or isolation, of services or activities which are inherently unprofitable, but the continuing provision of which is required by governments to satisfy policy goals, such as poverty alleviation or regional development. Such unprofitable activities may be related to particular market segments, as is the case with third class or economy passenger services upon which many governments of the region impose fare ceilings or caps, or they may be related to operation of particular parts of the network such as branch lines, or finally they may be related to a requirement to provide for employee welfare or for the retention of employees who would otherwise be declared as surplus.

One solution to this problem which is gaining popularity throughout the region and elsewhere is the identification and explicit funding of these services as ***Community,*** or ***Public, Service Obligations (CSOs or PSOs).*** Effectively, implementation of this solution would mean that a railway system would be required to forecast and *agree with the government prior to the commencement of each financial year*, a level of explicit subsidy to be paid by the government to eliminate losses, which might otherwise be incurred on services identified as CSOs or PSOs. This amount would then be paid to the railway as a specific revenue supplement.

An important prerequisite for the operation of a CSO/PSO contract is the availability of discrete and at least annually updated cost estimates for each declared CSO activity. Apart from providing a basis for explicit subsidization of unprofitable components of railway business, isolation of the costs of CSO/PSO activities has the advantage of revealing the financial performance of potentially profitable components, allowing a more focused approach to developing strategies for improvement of this performance.

The policy of cross-subsidization of unprofitable traffics by the financial surpluses of profitable traffics (as practiced by several of the region's railways) will not generally allow the strengths of the latter to be fully developed or exploited, and indeed may well arouse customer resistance and result in loss of traffic. For these reasons, explicit

subsidization of unprofitable but necessary activities, via an appropriate funding mechanism, such as CSO or PSO funding, may well be crucial for the long-term survival of railways.

4.4.2 Responding to Increasing Competition

The fact that railways, worldwide, are being exposed to an increasing intensity of competition from other transport modes, notably from road transport, reinforces the need for railway organizations to implement systematic marketing techniques. Over at least the past two decades and possibly over a longer timeframe, this intensified competition has succeeded in reducing the market share of rail in all traffic segments, but most notably in the freight traffic segments. Coupled with reducing real levels of financial support for maintenance of rail systems, this intensifying competition has had the effect of further depressing railway profitability.

An essential function of marketing management is to gather and to act on intelligence about the activities and the pricing strategies of competitors. In this way, it can help to lessen the adverse impacts of competition on railway profitability. Not the least important aspect of marketing management's role in this context is its ability to provide railway corporate management with adequate market intelligence to be able to effectively lobby governments in order to achieve a more equitable basis of competition within the transport sector.

It can be fairly claimed that the main emphasis in the development of national transport policies within the region and elsewhere over recent years has been the removal of the economic regulation of transport, often referred to as *transport deregulation or liberalization*. This has produced some beneficial effects in terms of encouraging greater levels of competition within the sector, but at the same time the focus on deregulation has obscured from the view of the transport policy makers of the region the urgent necessity of achieving an adequate level of cost recovery from commercial road transport operators.

That there is an under-recovery of the costs attributable to the use of the public road system by road transport operators, especially operators of heavy commercial vehicles, is well documented in World Bank reports and elsewhere. However, the wider effects of current road cost recovery policies are not generally well understood. Perhaps their most damaging effect is that they set an artificial ceiling on the level of railway rates and charges, by facilitating predatory competition on the part of road transport operators who in many countries of the region are assisted by artificially low cost structures and an absence of commercial regulation. The consequence of these policies is that taxpayers *could* face a double burden - in the form of a greater net commitment of public funds for road maintenance (where there is insufficient cross-subsidization from charges on other categories of road users), plus a greater commitment of public funds to cover the railway financial deficit which would be significantly larger than it

would have been, had there been equitable competition.

The detrimental impacts of government road cost recovery policies must in the first instance be addressed by direct action by railway management to lobby governments to change their policies. Implementation of a systematic marketing approach will not of itself allow railways to successfully combat these adverse impacts, but it will at least lead to a better understanding of the problem and provide a sound basis on which railway managements can lobby governments for its resolution.

In addition, these adverse impacts can be minimized by the application of marketing strategies in particular traffic, or market, segments in which customers carefully trade off service factors against price in making choices about mode of transportation. The cheapest service will not always be selected, if other customer requirements, such as those associated with frequency, transit reliability and consignment security (in the case of freight traffic) are not also satisfied. Different market segments will typically place different weights on price and service factors, and railways will be in the best position to be able to exploit these differences if they apply marketing techniques which will first allow customer needs to be accurately identified and then answered with tailor-made price and service strategies.

Application of customer oriented marketing strategies will require not only that railways develop a detailed knowledge of their customers, but also that they routinely gather and assess intelligence on their competitors.

4.5 THE PLACE OF MARKETING IN THE RAILWAY ORGANIZATION

4.5.1 Considerations for Railway Marketing unit

The position of the marketing unit in the railway organization chart and the structure of the marketing unit itself are important considerations, since they indicate very clearly the significance attached to the role of Marketing within the corporate organization and largely determine the effectiveness of the marketing function in achieving corporate goals. So, for the development of a Marketing capability, careful consideration should be given to the structure of the Marketing unit, the reporting relationships within this unit, and the reporting relationships between this Marketing unit and the senior corporate management positions in the overall organization.

The structure and form of organization adopted desirably should permit:

(i) Close and frequent communications between the Chief Executive Officer and the head of the Marketing unit, with both persons accepting a leading role in promoting a customer oriented marketing culture throughout the organization. (This is likely to require that the *reporting line* from the

Chief Executive Officer to the head of the Marketing unit be as short as possible);

(ii) Effective co-ordination of railway commercial and operational activities, perhaps suggesting that both functions should be integrated in an organizational sense;

(iii) Integration of all elements of the marketing mix under a single management function, suggesting that responsibility for sales, market research and planning, pricing, advertising and promotion, and physical distribution, should be centralized within the marketing unit.

4.5.2 The Position of Marketing Within the Corporate Structure

There are numerous models, which can provide guidance for the organization of the marketing function within the overall corporate structure of railway organizations. However, three organizational models appear to have so far to have found favor within the region. They are:

- ❖ Marketing as a functional department
- ❖ Marketing as a service department
- ❖ Marketing as a strategic business unit

The first of these models, the *functional department model*, is the most commonly applied form of organization for railways and is illustrated in figure 4-3. This form of organization has been adopted by a majority of the region's railways which have introduced a marketing/commercial function. It was also used extensively in Australia before a majority of the government owned railway systems in that country adopted a strategic business unit approach. The distinct advantage of this model is that integrates the railway marketing and operations functions under the management of a single senior corporate manager, who reports directly to the Chief Executive Officer. Of all the organizational models available, this type of arrangement is most likely to ensure that the activities of staff primarily responsible for *maintaining an interface with railway customers* and of staff primarily responsible for *service delivery* are effectively harmonized and coordinated. Amongst other things, this form of organization should facilitate (but cannot of itself ensure) effective and frequent communication between the personnel involved in each of these two functions.

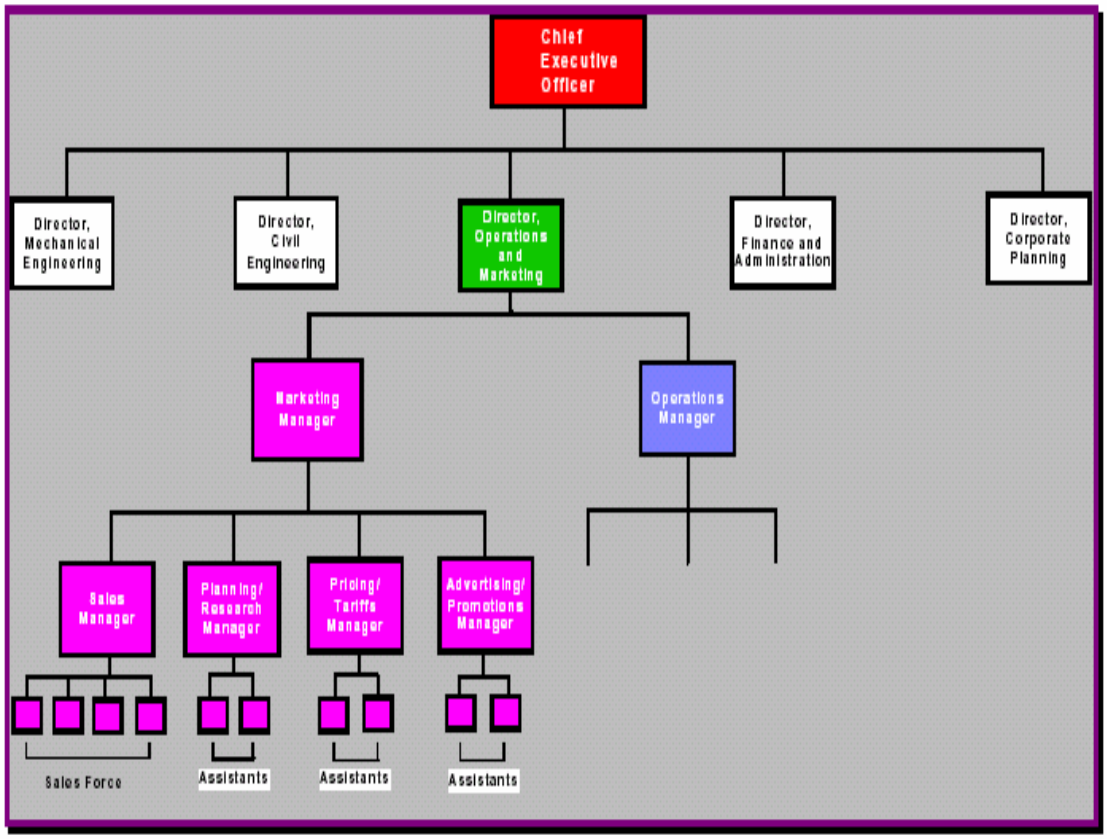


Figure 4-3: The Functional Department Model of Railway organization

Source: ESCAP: Guidelines for Development of **Railway** Marketing Systems and Procedures [http://www.unescap.org]

The second-listed form of organization, *Marketing as a service department*, involves a more passive role for Marketing in the corporate organization. Generally, this model integrates Marketing with the Corporate Planning function, under a single senior corporate manager reporting directly to the Chief Executive Officer. While this has the advantage of integrating the lead planning role of marketing within the corporate planning structure, it could threaten the close contact, which should exist between marketing staff and railway customers, thereby reducing the marketing plan to an "academic" exercise, devoid of customer inputs. It should be noted also that, almost by definition, a Corporate Planning unit within any organization has a coordinating function - it must assemble planning inputs from all other units in the organization. Arguably, such a unit would be no less effective in discharging this role if Marketing were to be organizationally independent of it, in the sense that Marketing would be just like any other unit of the organization, contributing planning inputs under the co-ordination of the central Corporate Planning unit.

The last listed form of organization, Marketing as a *strategic business unit*, represents an extension of the concept of a product or brand-based organization, as featured in

many Marketing textbooks and as applied mostly in the field of consumer product marketing in many western developed countries. From a railway perspective, it involves structuring an organization around key units of its business, which for the most part are capable of being managed separately. These units may be groups of core business services, such as *Passenger* and *Freight* services, or diversified activities, such as *Real Estate* or *Commercial Property Development.*

In the railway sector, however, few business segments are discrete in an operational sense and hence most consume shared resources such as track, signaling and motive power. Nevertheless, there are very often advantages in managing as separate units those businesses for which a large proportion of the resources consumed are specific to those businesses. For example, the costs associated with passenger stations and related facilities, as well as those associated with the passenger rolling stock fleet constitute a relatively large share of the total costs of operating passenger services, and specialized management of these resources is possible and desirable. Similar observations may be made about freight traffic, in respect of the management of marshalling yards, freight terminals, freight rolling stock and other freight dedicated resources.

In addition, the passenger and freight elements of railway business invariably require dedicated pricing policies, sales efforts and promotional campaigns. For this and the abovementioned reasons, better management of passenger, freight and other specialized elements of railway business (e.g. parcels, real estate) can possibly be achieved by separating them into *Strategic Business Units,* each with its own marketing and operational management components.

Of course it is possible to opt for various combinations of each of these three organizational forms. One railway, which has adopted a hybrid form of organization, is the Malayan Railway (KTM Berhad). The organizational structure of this railway combines features of the third listed form of organization (business units) with features of the second listed type of organization (marketing as a service department).

In 1992, the Malayan Railway or Keretapi Tanah Melayu (KTM) was separated from direct government budgetary control and restructured as a business enterprise under government ownership. The new corporatized organization, designated KTM Berhad, was built around an entirely new organization structure, which included Strategic Business Units, or SBU's, but also embodied some features of an organization with a Marketing cell functioning as service department.

There are four SBU's, of which three - Passenger Services, Freight Services and Commuter Services have a reporting line to the Director, Operation and Customer Service who is also responsible for the Operations or Traffic function. The fourth SBU, Property, has a reporting line to the Director, Property Management. The three core business SBU's integrate marketing functions with some operating functions which are specific to their business (e.g.. the Freight SBU has responsibility for wagon distribution, the Passenger SBU has responsibility for ticketing, etc). Responsibility

for advertising and promotion is, however, exercised by the Corporate Services Division, which is also responsible for coordinating the preparation of the 5-year Corporate and annual Business Plans (with planning inputs from the SBU's which must prepare their own annual marketing plans). For this reason, the SBU's have a "dotted" reporting line to the Director, Corporate Services.

However, there are, both within and outside the region, examples of large railway systems which have opted for complete separation of management responsibility for the marketing and operations functions. One such is the National Rail Corporation Ltd of Australia which transports all interstate rail freight. It has a Corporate Headquarters located in Sydney, a Marketing Headquarters located in Melbourne, and an Operations Headquarters located in Adelaide (which is some 778 km by rail from Melbourne). The heads of the Marketing and Operations Divisions report directly to the Managing Director, based in Sydney. In this organization, only the operations and engineering functions are regionalized. To a large extent, the geographical environment in which the NRC operates, with a major concentration of railway customers in the east of the country, has dictated its organizational form but the separation of the units responsible for customer service from those responsible for customer liaison will mean that there will be additional pressure on the Managing Director (the Chief Executive Officer) to ensure that service delivery meets customer expectations.

The geographical size of the railway system will clearly have a strong influence on the type of organization structure which is adopted. If it is considered desirable to integrate the marketing and operations functions, large regionalized railways need to have an organization structure which is duplicated at headquarters and regional level. For example, in the Indian Railways both functions are within the responsibility of the Board Member for Traffic at Headquarters level and he has assisting him an Additional Member (Traffic) and an Additional Member (Commercial), each with their own departmental organizations. This structure is duplicated in each of the nine zonal, or regional, railways, with an Operations Manager (responsible for operating functions) and a Commercial Manager (responsible for marketing functions), both having their own departmental organizations and reporting directly to the General Manager of the zonal railway, but with an informal reporting line to their respective counterparts at headquarters. Only by organizational duplication of this type can effective, and vital, coordination of operations and marketing functions be assured right down to the level of the smallest field unit in such a large organization.

In Bangladesh Railway, the corporate structure is somewhat like the functional department model, which is graphically shown in the appendix.

4.5.3 Structure of the Marketing Unit

The structure of a typical Railway Marketing Department is also shown in figure 4-1. This structure is somewhat relevant to the organizational arrangements of Bangladesh Railway as well as many other railway organization of the world. Thus, it would be as applicable to a Marketing unit structured as a functional or service department as it would be to a Marketing unit structured as part of a Strategic Business Unit.

It is important that the Marketing unit should have responsibility for all seven elements of the Marketing mix. The unit will normally have four sections, each under a section manager, with responsibility for Sales, Planning/Market Research, Pricing and Advertising/Promotion. If justified by the workload, it may also be desirable to have a fifth department to provide advice to customers in logistics and materials handling matters (including the layout of rail loading/unloading facilities). Alternatively, responsibility for this function can rest with the Sales section.

4.6 ROLE OF MARKETING IN RAILWAY CORPORATE PLANNING

4.6.1 Importance of Corporate Plan

Not all of the region's railways have so far implemented a corporate plan, but an increasing number are embracing a corporate planning philosophy. A well structured, practical corporate plan will ensure that an organization's resources and activities are always directed to the achievement of its own goals on the one hand and those of governments (and by inference taxpayers) on the other. Marketing can and must play a leading role in the corporate planning process by translating customer requirements into railway requirements for human physical and financial resources and management actions. The Railway Marketing Unit will also have a key role, along with top-level management in developing the spirit of marketing in other departments of the railway, notably the Civil Engineering, Mechanical Engineering and Operations departments. It is therefore essential that the marketing system should be an integral part of the railway corporate planning structure, which embodies a mixture of "top down" and "bottom up" planning philosophy.

4.6.2 Corporate Plan Linkages

In essence, a corporate plan will link together the plans of the functional departments of a railway within a cohesive framework, which will also integrate planning inputs from external sources, such as the National Economic Development, or other government plans. One possible approach to a railway corporate planning process is illustrated in Figure 4-4. In this process, interlinked plans are prepared at four levels - at the macroeconomic level in the case of the National Economic Development Plan, and at the corporate, marketing or business unit and functional department levels in the case of the railway organization.

The process begins with the ***National Economic Development Plan, which*** will usually be a product of specialist government planning agencies or of Ministries of Finance. National plans are generally prepared for at least a five-year time frame. They will usually signal the government's expectations with respect to the cost recovery goals of the railway and in some cases will specify in broad terms the commitment of investment funds to the railway. In addition they will provide government targets for the main macroeconomic indicators (including the general inflation rate and public expenditure limits), as well as a statement of regional development priorities. It is the last element which is of considerable significance to railways, since development priorities will provide some indication of the likely regional distribution of public funding for development. In some cases, National Plans will specify in detail the major infrastructure projects, such as new ports and associated land transport infrastructure, to be promoted as part of a government's regional development policy.

At the next level, the ***Railway Corporate Plan*** responds to policy guidelines contained in the National Economic Development Plan and provides guidelines in the form of corporate objectives, goals and strategies for the preparation of marketing or business unit plans.

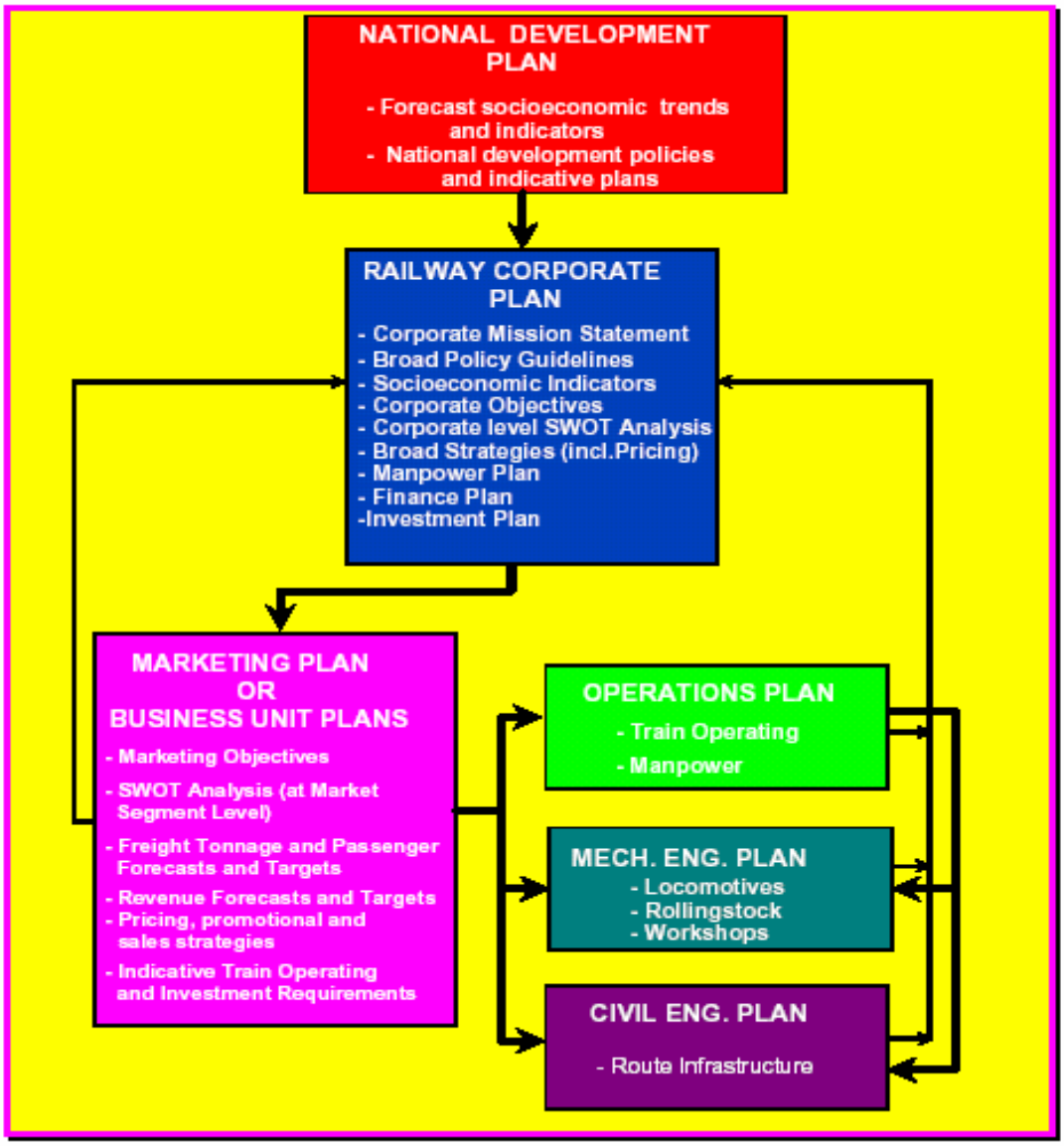


Figure 4-4: The Railway Corporate Planning Process

Next in the planning hierarchy below the level of the Corporate Plan, ***Marketing* or *Business Unit*** plans have the function of developing pricing, sales and promotional strategies aimed at satisfying customer needs and maximizing revenue for the railway organization. Most importantly, they have the key function of *translating the needs of the marketplace into requirements for railway service and resources in the form of manpower, route infrastructure, locomotives and rolling stock.*

Service requirements identified in the marketing or business unit plans are then converted into manpower deployment and train operating plans at the level of the Traffic or Operations Department and are incorporated in the ***Operations Plan.*** The train operating plan in turn provides the basis on which maintenance and investment

plans may be prepared by the Mechanical Engineering Department covering requirements for locomotives, rolling stock and workshops facilities and by the Civil Engineering Department covering track, structures and signaling requirements. These requirements are incorporated in the ***Mechanical Engineering Plan*** and the ***Civil Engineering Plan,*** respectively.

Necessarily, there is feedback from the functional department plans to the corporate plan, in order to provide a basis for the preparation of manpower, finance and investment plans at the corporate level. Similarly there is feedback from the Marketing or Business Unit plans to the corporate plan in terms of traffic and revenue forecasts, which provide the basis for the Finance Plan.

In most cases where a corporate planning system has been introduced, it works as shown in figure 4-4, although the planning timeframe and cycle often varies from railway to railway. Usually, the Corporate Plan covers a five-year rolling timeframe, in line with that of the National Economic Development Plans, but lower order plans can sometimes cover an annual timeframe. Similarly, the Corporate Plan is usually revised at intervals less frequent than annually, whereas the lower order plans are usually revised on an annual basis.

Ideally, a corporate plan should also provide a framework for the preparation of annual revenue and expenditure budgets for railways, with the targets of the first year of the corporate plan timeframe providing the budget base.

4.6.3 Corporate Plan Elements

Important elements of a corporate plan providing guidelines for the marketing and functional department plans of railway may be described as follows:

- **The Corporate Mission Statement**

This indicates the organization's overall purpose and direction. It answers basic questions such as: *"Why does this organization exist?"* and *"What business should it be in?"* It is necessarily expressed in broad terms, but should not be so broadly phrased as to lack focus. Statements such as "We want to provide the highest quality service at the cheapest fares" will not be particularly helpful to management seeking practical guidelines in order to be able to make difficult decisions. Kotler, a marketing expert, suggests that the mission statement should define the major *competitive scopes* within which the organization will operate. These include: the *industry scope* or range of industries in which the organization will consider operating; the *products and applications scope*, or the range of products (services) and applications in which the

organization will participate; the *competencies scope*, or the range of technological and other core competencies that the organization will master and apply; the *market segment scope*, or the type of markets or customers the organization will serve; the *vertical scope*, or the extent of vertical integration to be allowed in the organization's activities; and finally, the *geographical scope*, or the range of regions (or countries) in which the organization will operate. Kotler also suggests that the corporate mission statement should stress the *policies, which* the organization wishes to apply in dealing with customers, suppliers, distributors, competitors and other important groups. Above all, he considers that the mission statement should provide a *vision* and a *direction* for the organization for the next 10-20 years.

The Corporate Mission Statement which may be adopted by Bangladesh Railway can be best described as follows:

> • ***Our aim is to be the best transport service provider in the country***
> • ***All day, every day, we aim to offer a reliable, welcoming and value for money service***
> • ***Our business will prosper because customers use us repeatedly and recommend the service to others***

This type of mission statement should be backed up with more specific statements of the corporate aims of the organization.

❖ Corporate Objectives

While the Corporate Mission Statement should define the broad purpose and direction of the organization in the longer term, the Corporate Objectives will have a more specific focus. They should indicate the specific targets, both physical and financial, to be achieved by the organization within the tenure of the corporate plan. For example, they could incorporate cost recovery objectives, such as *" Reduction of the operating deficit to $ W million, by year X"* or productivity improvement objectives, such as *"Increase gross tones per annum per employee to Y, by year* Z". They will provide a clear target at which the strategies and plans of all components of the organization will be aimed during the timeframe of the corporate plan.

❖ Corporate Level SWOT Analysis

At the corporate level, a SWOT Analysis should provide an realistic assessment of the strengths, weaknesses, opportunities and threats working for or against the organization in its quest to achieve its corporate objectives. SWOT factors may be assessed in relation both to the organization's external and internal environments. For an external SWOT analysis, the organization would need to assess the likely influence of factors external to the organization, which might present opportunities or threats for the organization. An example of an external opportunity might be the imposition by

the government of increased road user charges on commercial road transport operators, since this might have the effect of improving the competitiveness of rail in relation to road transport operators.

Conversely, an increase in allowable axle loads for trucks might be an externally imposed threat for rail, since it would reduce its competitiveness with road transport. Internal SWOT analyses on the other hand are intended to identify the SWOT factors of the organization, *in relation to those of its major competitors.* They are intended to identify any positive or negative characteristics of the organization which must either be exploited or corrected to enable the organization to achieve its stated corporate objectives. An example of an internal weakness might be the railway's inability to price flexibly in order to obtain additional traffic (when this would be a major strength for the competition). On the contrary, an example of an internal strength might be the railway's ability to guarantee the security of freight consignments against damage or pilferage, when its competitors might not be able to provide such guarantees.

❖ Corporate Strategies

Broad corporate strategies must be devised in order to ensure achievement of the corporate objectives. The important point about corporate strategies is that they must ***directly*** address specific corporate objectives. Thus, for example if the relevant objective is to reduce the incidence of in-service locomotive failures, the corresponding strategy might be to re-deploy fitters or diesel maintainers to outstations, where they can carry out routine preventative maintenance. Similarly, an objective to improve wagon turn rounds might be addressed by a strategy to increase block train running by offering rate incentives to selected major customers to accumulate loading for block train operation.

❖ Manpower Plan

The Manpower plan component of the corporate plan is intended to identify the overall manpower requirement for the railway organization in terms of numbers of employees required by grade/skill category and by location. These manpower requirements should be derived directly from the functional department plans and have their basis in the marketing or business unit plan.

❖ Finance Plan

The Finance Plan establishes a basis for managing the organization's cash flow during the tenure of the corporate plan. It incorporates revenue and expenditure forecasts derived directly from the functional department and marketing/business unit plans.

Where relevant, it will also set out the forecast requirement for PSO/CSO supplements to revenue during the tenure of the corporate plan.

- **Investment Plan**

The Investment Plan details the organization's requirement for investment in new capital assets during the tenure of the corporate plan. The physical requirement of rolling stock and locomotives, extra track capacity or new line construction, and terminal infrastructure is identified and costed in the plan. Again, these requirements are sourced from the assessment of a train operating plan which has its origins in the appraisal of customer needs in the Marketing plan.

4.7 THE RAILWAY MARKETING PLAN

4.7.1 Rationale & Goal

Apart from its importance as the primary source of input of customer related data as well as of traffic and revenue forecasts to the Corporate Plan, the Marketing Plan has a vital role as the vehicle for expression of: the organization's commercial objectives; the strategies for realization of these objectives; and the actions (with assigned responsibilities) necessary to implement the strategies. Necessarily, the focus of the Marketing Plan is at the level of individual traffic, or market, segments, and indeed an important element of the Marketing Plan is the definition of these segments. Realization of objectives set for individual segments will collectively result in achievement of the overall corporate objectives as identified in the Corporate Plan. An essential requirement of any Marketing Plan is that it must be both ***practical*** and ***actionable*****.**

4.7.2 Market Segmentation

A good Marketing Plan must contain techniques for segmenting the market. Markets consist of buyers and buyers are not homogeneous in terms of their demographic profiles, wants, purchasing power, geographical location, buying attitudes, and buying practices. Therefore it is unlikely that a broad marketing strategy applied across the entire spectrum of a railway's customers will succeed, because the needs of some (or probably most) customers will not be met in this process.

By contrast, separate marketing strategies focused on individual customer groups, each consisting of customers with similar characteristics and needs, are more likely to succeed. These customer groups are called ***market segments*** and the process of identifying and separating these groups for the purposes of developing marketing

plans and strategies and of managing sales force activities is called ***market segmentation***.

Any, or all, of the six above-listed characteristics may be used to segment a market. In the case of railways, however, a two-tier process is likely to be involved. First, the railway's customers will be segmented into *broad market or business groups*, such as:

- ***Commuters*** [7]
- ***Medium-Long Distance Passengers*** [8]
- ***Freight Customers***
- ***Parcels and Express Freight Customers***
- ***Commercial Property Lessors***
- ***Others (e.g. advertisers using railway property)***

7 This term is normally used to describe passengers who use railway services to travel between their homes in the suburbs of a city and their places of employment in the city center. Typically, such journeys cover distances of no more than 100 km.
8 Generally used to denote passengers using rail to travel over distances of greater than 100 km, often between major cities.

Next, these broad groups will be divided into market segments. For *Commuter* traffic, it is unlikely that there will be any need for further subdivision of the market, although in the case of a few of the region's railways (notably that of Indonesia), premium or first class commuter services are provided with the aim of capturing higher income business travelers, who might otherwise use private automobiles.

For *Medium-Long Distance Passenger* traffic, segments based on demographic/ income characteristics may be appropriate. Again, some of the region's railways have focused on business travelers, while some (e.g. the Indian railways) have very successfully targeted group tour travelers and in conjunction with tour and hospitality agencies have developed specialized services to cater for the needs of this segment. Many of the region's railways have an obligation to provide "welfare significant" services, such as economy class services catering to the needs of low and lower middle income passengers and linking villages or district towns with key cities and the capital.

Within the higher income, business or tourist segments thus identified in the Medium-Long Distance Passenger market, there may be a further subdivision into service-based segments (e.g. air-conditioned sitting car services and air-conditioned sleeping car services).

For *Freight* customers, the subdivision into market segments is likely to be based on a combination of commodity type and handling mode (bulk, break-bulk and container).

Almost all of the region's railways now identify container traffic as a segment in its own right.

Other segments are mainly commodity-based. For example, in addition to containers, the Thai and Malaysian railways identify about 14-15 commodity-based segments and the Indian Railways 10 or 11 commodity based segments. Each freight segment generally has its own requirements in terms of loading/transport cycle, wagon type, handling method and tariff (price). Bangladesh Railway can easily identify several commodity-based services like garments, bulk commodities and other exportable goods. The commodity segments actually identified will be of particular significance to the railway seeking to segment its markets.

While there appears to be no obvious basis for the segmentation of parcels and express freight traffic, it is likely that this market may be subdivided on the basis of time sensitivity (e.g. overnight delivery, second day delivery, etc.).

The Commercial Property Leasing market will desirably be segmented in terms of end use, e.g. Warehousing, Retail Trade, Office accommodation, Hotel accommodation, etc., and possibly also in terms of lease tenure (short, medium and long term). Such as the Indonesian Railways with their *Parahyungan* and *Argogede* executive services between Jakarta and Bandung, and the Indian Railways with their *Shatabdi* and *Rajdhani* premium services between significant business centers and between the capital and significant business centers, respectively.

4.7.3 Importance of the Railway Marketing Plan

The formal *Marketing Plan* is one of the most important outputs of the marketing process. As indicated previously, it is desirable, if not essential, that the Marketing Plan should be developed as an integral part of a Railway Corporate Plan, and that it should identify marketing objectives and strategies which will support the achievement of the corporate objectives, as outlined in the Corporate Plan. However, unlike the Corporate Plan which will not normally be revised every year, the Marketing Plan should be revised annually, although it should also cover a longer planning timeframe (e.g. five years).

The purpose of the plan will be to: review past operational performance; assess the potential of the railway for improved performance and traffic growth, relative to competitors; define or re-define (as necessary) marketing objectives; specify probable earnings, pricing and promotional strategies to achieve growth projected in the plan; develop a program of action to put the plan into effect; and establish methods and systems to monitor performance against the plan.

Bangladesh Railway should be rational and careful in preparing its marketing plan to cope with future uncertainty and to be more competitive and market-oriented and is expected to serve both as a commercial enterprise and as a public utility service.

4.7.4 Marketing Strategies

As with Marketing Objectives, the strategies devised to achieve these objectives must be practical, actionable (realistically capable of implementation) and, above all, relevant and responsive to customer needs. They must also relate directly to marketing objectives identified for each market segment. Marketing strategies include actions taken to modify elements of the marketing mix -product, price, place and promotion - in order to achieve marketing objectives.

The Indian Railways provides an example of one of the region's railway systems, which has defined clear objectives for each of its market segments and has then successfully applied strategies to achieve these objectives. Bangladesh railway can follow this strategy.

The present age is the age of tough competition. BR has to develop and apply some specific strategic marketing plan to hold and increase market share. Some of the major strategies are as follows:

1 Inherited physical and structural weakness will be reduced to a minimum level by constructing new direct link route on priority basis.
2 Giving proper attention to time schedule, passenger comfort, and risk analysis quality of service will be increased.
3 Expired locomotives, coaching vehicles, wagons will be replaced urgently.
4 Efficient and coordinated management system will be developed.
5 Special attention will be given to container handling in both zones.
6 Ensuring security and comfort as well as better services new markets will be attracted.
7 Proper utilization of railway lands and properties should be ensured.

4.7.5 Action Programs

Another important element of the Marketing Plan is the statement of actions needed to put the plan into effect and the assignment of responsibilities for these actions. This feature of the Marketing Plan recognizes the vital role of Marketing in leading and coordinating all of the railway activities aimed at delivery of railway services to satisfy customer needs. Thus, actions will be required of all functional departments, but especially the Operations, Mechanical Engineering and Civil Engineering departments, to support achievement of the organization's commercial objectives. For example, if high standards of locomotive availability are necessary in order support frequent high volume traffics, then the Marketing Plan will require actions on the part of the Chief Mechanical Engineer and his staff to assure the necessary level of availability.

4.7.6 Traffic, Revenue and Profit Projections

Forecasts of traffic volume, revenue and financial contribution are important outputs of a Marketing Plan (and important inputs to the Corporate Plan). They are market segment related and are usually prepared as annual totals over a five year timescale. In most organizations, their preparation will be the responsibility of the Marketing Planning Manager and his staff. While sophisticated mathematical models may be employed to generate traffic forecasts, experience has shown that these techniques rarely produce reliable results. Better results have usually been obtained when the traffic forecasts prepared by railways have been based on information received from customers in the case of freight traffic and on a combination of government demographic studies and market surveys in the case of passenger traffic. In the case of freight traffic, there is no better substitute for the production and/or distribution plans of customers (or potential customers) as a basis for traffic forecasts, but access to this information depends upon the establishment of a strong working relationship between a railway's customers and its salesforce.

Preparation of revenue forecasts is a comparatively uncomplicated task. It requires making assumptions about the inflation of passenger fares and freight rates and applying the projected rates to the physical traffic forecasts.

Forecasts of market segment financial contributions are vital inputs for the forecasts of the corporate profit and loss position in the Corporate Plan. Their preparation depends upon the availability of suitable up-to-date estimates of traffic costs, by market segment.

4.7.7 Determination of Railway Resource Requirements

The key role of the Marketing Plan in providing information on customer requirements as a basis for determining the railway's needs of human and physical resources is highly important. This is not to suggest, however, that the Marketing Plan will be capable of identifying all of the needs. For example, the number and type of locomotives required in a railway system's fleet must be determined as part of a specialized locomotive fleet planning process which will incorporate information on train sizes, train scheduling, maintenance scheduling and running performance characteristics, in addition to traffic forecasts by route. Marketing inputs will nevertheless be vital for the preparation of functional department plans on a consistent foundation of traffic forecasts which reflect actual customer needs. In addition, the Marketing Plan must be capable of directly transferring to these functional department plans details of customer needs for specialized resources, such as specialized wagons or specialized equipment for the loading and discharge of wagons.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Policies For Integrated And Multimodal Transport Development

One of the major reasons behind inappropriate modal mix which is inducing more traffic to road transport is the inappropriate allocation of resources to roads viz-a-viz other competing modes like railways and IWT. This has led to faster improvement of road infrastructure compared to railways and IWT where the infrastructures can not be properly maintained, due to lack of resource. As a result, railways and IWT are always at a disadvantage compared to road transport. Ideally speaking, Government should have taken the leadership steps to address the problem of inappropriate modal mix and promote integrated and multimodal transport system in the country. Under the above circumstances, the only way is to conduct a high quality in-depth study and immediately take action programs accordingly.

Appropriate policies should be formulated for integrated and multimodal transport development in the country**.** In this context we recommend the follows:

i) To address the inappropriate modal mix which has led to the biased development of road transport in the country and to develop an integrated, efficient and affordable multimodal transport system which is sustainable from a social, economic and environmental point of view, the GOB needs to take immediate action to formulate and adopt a new vision which clearly spells out transport policies, involving all stakeholders.

ii) In this context, it is recommended that an inter-ministerial committee, supported by quality professionals of high standing, should be set up immediately to undertake an in-depth study of the full cost (economic costs) of each mode of transport together with the cost of externalities created by each mode.

iii) To assist the Ministry of Transport in setting coordinated policies and ensure integrated development of the transport system, there should be a high profile **Policy Research Unit** (PRU) headed by a professional of high standing, directly reporting to the Principal Secretary of the Ministry.

iv) Bangladesh also needs an independent in-house transport research and analytical capability. It is therefore recommended that an autonomous **National Transport Research Center** (NTRC) be established. The Planning Commission, the Transport Ministry and other government agencies could use research findings from the

NTRC in the allocation of resources for the development of different modes, and in setting appropriate policies to further improve the transport situation.

v) In order to ensure sustainability and continuity, the national experts of Bangladesh should be given more opportunities to become involved in planning, development and in solving transport problems including those of urban transport.

vi) More and more short training programs should be organized on MMT to promote the concept, in practice among transport operators/freight forwarders, for encouraging more efficient movement of international trade.

Government has already recognized the need for an integrated, efficient, sustainable and affordable multimodal transport system. **"Land Transport Policy"** which is currently under consideration has also supported this integrated concept which should be pursued in the future development of the national transport system. Ideally speaking, Bangladesh needs to have a "Vision" for transport sector development over a period of say 20 years, and all stakeholders should work towards that supported by appropriate policies, strategies, institutional framework, allocation of resources and effective implementation. The appropriate legislative and regulatory framework would be necessary to implement and oversee the wide range of measures needed to achieve the policy objectives of this sector. Such measures would include:

- Carrying out multimodal studies and appraisals, developing model transportation plans based on multimodalism;
- Identifying impacts of multimodalism on infrastructure practices, financial issues, new technologies, documenting multimodal transfers of freight and the relationship of multimodal transportation to productivity;
- Establishing and enforcing project appraisal criteria for transport sector projects factoring fuel efficiency, land use, externalities involving environment, ecology, air quality, noise, greenhouse gases, accidents, congestion, land depletion etc.;
- Exploring and encouraging Public-Private Partnerships (PPPs) to develop the transport corridors based on multimodal approach;
- Liberalizing of market access in transport;
- Addressing the issue of transport pricing- users to pay for the costs they incur including external costs;
- Budgetary and fiscal policy, to link the internalization of external, and especially environmental costs;
- Evolving and enforcing uniform charging systems for infrastructure and external costs;
- Changing for marginal social costs for ensuring fair competition within and between modes;
- Establishing level-playing fields for effective competition amongst the

modes of transport;

- Identifying and removing legal impediments to efficient multimodal transportation, coordination/regulation of the transport modes for promotion of multimodal transportation; and
- Developing intermodal standardization, harmonization of standards and ensuring international cooperation for seamless multimodal operation.

5.2 Preparing the Railway for Market-led Multimodal Operation

a. Railway infrastructure was initially designed and built for multimodal operation connecting sea and river ports with proper terminals and facilities for transfer of freight as well passengers to waterways and roads. Over time, in face of uneven competition from the road sector, the multimodal railway facilities had to be abandoned. For turning inter-modality into reality all sea and river ports shall have to be connected with improved rail links with terminal facilities for cargo (including containers) and passenger so that railway can be turned into a commercially viable market-oriented organization.
b. Efficient train paths shall be allocated to freight, either in the form of infrastructure or as time slots.
c. As the Jamuna Bridge is operational with BG & MG, Indian Cargo by rail-borne container shall be brought up to Dhaka ICD.
d. Extend rail connection to the EPZ's and establish new ICD's as required.
e. Action to allow the development of multimodal corridors giving priority to freight and a high-speed network for passengers is to be undertaken. Step by step, a network of railway lines is to be dedicated exclusively to goods services to attach equal importance of goods.
f. Establish technical harmonization and interoperability between systems, particularly for containers.
g. Improving modal transfer facilities, providing adequate infrastructure, providing integrated ticketing facilities, offering an integrated 'train & taxi' services in a single ticket etc., for passengers using different modes of transport for a single journey.
h. Establish rail based mass transit corridors in Dhaka city.
i. Finally, recognize railway as business units with the focus on business in the multimodal environment.

5.3 Conclusion and Recommendation

There is a lot of scope to increase the efficiency of Bangladesh Railway. Most important way is to strengthen BR's operational capacity and efficiency through reducing its inherited physical & structural weakness by rehabilitation as well as reorientation and all the way through institutional and organizational reform processes and developing & implementing effective integrated multimodal transport policy

emphasizing the importance of railway transportation in respect to our socio-economic context. The adoption of market-led philosophy can make BR more competitive and market-oriented commercial viable organization. This reorientation and reform processes may be appeared as blessing to BR as well as to country's transport sector for the sustainable development of the country. Operational efficiency of BR would be improved through optimizing the use of assets. Thus railway would be more responsive to market needs through organizational reform incorporating structural changes and sound business practices.

In this context, a transportation act and appropriate regulatory institutions have to be in place for enforcing and overseeing objectives of the transport sector. Legislation must be properly implemented and enforced for proper functioning of transport internal market. An independent Commission for Integrated Transport should be established to advise Government and to monitor progress on the implementation of policy. Present deficiencies of sectoral bias, improper modal mix, unsustainable development, and un-integrated development should be removed through strategic planning. In this connection, we would strongly recommend the followings:

i) Bangladesh Railway should commercialize some of its service operations and introduce a new market-based pricing system. Its routes and services need to be integrated with other surface modes to make the railway more attractive to the users. These issues have to be addressed at a higher level of the Government in order to utilize the full potential of rail system. Commercialization of BR should be given priority over the institutional issues. BR management should be given full commercial freedom including authorities for hiring and firing, and at the same time made answerable for agreed performance targets. In order to be competitive, with road sector, officials must change their mind-set and operate like a private sector. The officials need to be more dynamic to solve problems, and think of providing door to door services in close cooperation with the truck operators.

ii) BR is also suffering from lack of investment for proper maintenance of tracks. The span of service life of maximum railway locomotives, carriages, vehicles, tracks, bridges, workshops etc. have already been expired. Sufficient funds have not been allocated for their maintenance and smooth operation for a long time. Thus BR was forced to face the uneven competition with other modes of transport. Recently, derailment has become very common. This has adverse impact on efficiency and reliability of services. Improved services should be ensured by aggressive development and rehabilitation of existing assets. Government has to patronize BR to reduce its operating bottlenecks and help to build its glorious image. As a huge financial involvement is required to increase the overall efficiency of BR, donor agencies should be invited to invest.

ii) The on-going reforms and reorganization of BR should be completed for transforming the organization into a public but commercial entity. Its infrastructure and operations need to be segregated and both operated on commercial principles. Whatever reform has been achieved so far should be consolidated by bringing the changes under legal coverage.

The reform and reorganization issue of BR with necessary commercial freedom should be implemented soon. In addition to organizational issues, introduction of business units for different core and non-core activities starting with pilot projects, with emphasis on Public Private Partnership (PPP) should be enhanced. The institutional changes will be brought about gradually as the business units grow. A modern costing system will be introduced to help taking judicious commercial decisions.

iii) Bangladesh Railway should provide the backbone of inter-city, intracity passenger transit and commuter services. Further areas of railway operations should be opened up to efficient private sector involvement.

iv) Towards rationalization of gauges in Bangladesh, the on-going program of dualization from Parbatipur to Dhaka, should be extended up to Chittagong, to facilitate regional integration, and provide uninterrupted broad gauge rail services from neighboring countries, to sea ports in Bangladesh. In addition, there is a need to standardize the coupling and braking system, as these restrict operating speeds for Indian trains hauling Bangladeshi wagons.

In case regional traffic opens up quickly, BR should plan to buy compatible BG wagons for the purpose, instead of changing all its assets to Indian standard.

v) The ICD at Kamalapur is not being used optimally. Bangladesh Railway should create facilities to carry more containers between Chittagong and Dhaka and should extend this service up to northern districts utilizing the capacity of JMB.

BR staffs responsible for container services need to be more aggressive to match the road transport/trucking industry lobby and marketing efforts. Greater cooperation and understanding between Chittagong Port Authority and BR is needed to overcome some of the problems being faced. Length of the railway track being laid within the port area is not long enough to accommodate one full train rack, as a result it will have adverse impact on the efficiency of container train operation

vi) To increase efficiency in handling container traffic, Bangladesh Railway may like to establish a separate self-sustaining organization such as CONCOR (Container Corporation of Indian Railways) under the Indian Railways. The handling of containers by BR could have improved a great deal, if a separate self-sustaining organization (like "CONCOR") could be established, to handle these containers.

vii) Multimodal studies are to be undertaken involving the objectives and issues of sustainable development. Problems on different modes of transport including access to ports and airports are to be identified and an integrated transport policy for the country based on multimodalism approach has to be developed and implemented.

viii) Action plan concerning legal, regulatory and institutional measures to achieve the policy objectives of sustainable transport are to be enforced by the government through legislative means.

ix) Finally, Railway's role as the dominant mode of transport has to be restored by targeted action plans and in this regard further detail studies are required.

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APPENDIX

A-1: Historical Events of Bangladesh Railway

- **15 November 1862:** construction of 53.11 kms of Broad Gauge (BG) line between Darsana and Jagati of Kushtia district by Eastern Bengal Railway.
- **1 January 1871:** Extention of Darsana-Jagati railway line up to Goalanda by Eastern Bengal Railway.
- **1882-84:** Bengal Central Railway Company constructed Benapole-Khulna BG railway line.
- **1 July 1884:** Government took over the management of Eastern Bengal Railway.
- **4 January 1885:** Railway Meter Gauge (MG) connection between Dhaka and Narayangonj, a distance of 14.98 kms by Dhaka State Railway, which was later on merged with Eastern Bengal State Railway.
- **1885:** Construction of Dhaka-Mymensingh railway section by Dhaka State Railway.
- **1 April 1887:** Eastern Bengal Railway was merged with Northern Bengal State Railway.
- **1891:** Construction of the Assam-Bengal Railway taken up with British Government assistance but was later on taken over by Assam-Bengal Railway Company.
- **1 July 1895:** opening of 149.89 kms MG lines between Chittagong and Comilla and 50.89 kms MG lines between Laksam and Chandpur by Assam-Bengal Railway.
- **3 November 1895:** Chittagong to Chittagong Port line was constructed.
- **1896:** Construction of MG line from Comilla to Akhaura and Akhaura to Karimgonj.
- **1897:** Single line section between Darsana and Poradaha converted into double line section.
- **1898-1899:** Mymensingh-Jagannathgonj MG railway line was constructed.
- **1899-1900:** MG railway line was constructed between Santahar Junction to Fulchhari by Brahmaputra-Sultanpur Railway Company.
- **1903:** Laksam-Noakhali section constructed by Noakhali (Bengal) Railway Company.
- **1 April 1904:** Bengal Central Railway Company and Brahmaputra-Sultanpur Railway Company taken over by Government managed Eastern Bengal Railway.
- **1905:** Opening of Kaunia-Bonarpara MG section and Government purchased the Noakhali (Bengal) Railway Company.
- **1 January 1906:** Noakhali (Bengal) Railway Company merged with Assam-Bengal Railway.

- **1909:** Poradaha-Bhairamara single line converted into double line.
- **1910-1914:** Akhaura-Tongi section opened. Conversion of Shakole to Santahar MG section into BG.
- **1912-1915:** Kulaura-Sylhet section opened.
- **1 January 1915:** Hardinge Railway Bridge was opened over the river Padma at Paksey.
- **1915-1916:** Sara-Sirajgonj line constructed by Sara-Sirajgonj Railway Company.
- **1916:** Bhairamara-Raita BG section opened.
- **1912-1918:** Gouripur-Mymensingh-Netrokona and Shamgonj-Jhariajanjail sections constructed by Mymensingh-Bhairab Bazar Railway Company.
- **1915-1932:** Bhairamara-Irshurdi-Abdulpur single line section converted into double line.
- **10 June 1918:** Rupsha-Bagerhat Narrow Gauge (NG) section constructed by a Branch line company.
- **July 1924:** Conversion of Santahar-Parbatipur MG section into BG.
- **September 1926:** Conversion of Parbatipur-Chilahati MG section into BG.
- **1928:** opening of Shaistagonj-Habigonj section.
- **1928-29:** Tista-Kurigram NG section converted into BG.
- **1929:** Shaistagonj-Balla and Chittagong-Hathazari sections opened.
- **1930:** Hathazari-Nazirhat MG qnd Abdulpur-Amnura BG sections opened.
- **1931:** Sholashahar-Dohazari section opened.
- **6 December 1937:** Opening of King VI George Bridge connecting Bhairab Bazar and Ashugonj over the river Meghna.
- **1941:** Jamalpur-Bahadurabad MG section opened.
- **1 January 1942:** Assam-Bengal Railway taken over by Government and amalgamated with the Eastern Bengal Railway under the name “Bengal and Assam Railway”.
- **1 October 1944:** Government took over Sara-Sirajgonj Railway Company.
- **1947:** Bengal and Assam Railway was split up and the portion within the boundary of erstwhile East Pakistan was named as “Eastern Bengal Railway”, the control remaining with Central Government of Pakistan.
- **1948-1949:** Government taken over Mymensingh-Bhairab Bazar Railway Company and Rupsa-Bagerhat Branch Line Company.
- **21 April 1951:** Jessore-Darsana Railway line opened to traffic.
- **October 1954:** Sylhet to Chatak Bazar railway line opened to traffic.
- **1 February 1961:** Eastern Bengal Railway renamed as Pakistan Eastern Railway.
- **1962:** A Railway Board was formed and management of Railway was placed under the Provincial Government.
- **1972:** Pakistan Eastern Railway renamed as Bangladesh Railway.
- **23 June 1998:** BG railway line extended from Jamtail to Ibrahimabad via Jamuna Multipurpose Bridge.
- **14 August 2003:** Inauguration of direct Intercity train Service from Rajshahi to Joydebpur (Dhaka) via Jamuna Multipurpose Bridge.

Table A-2: Bangladesh Railway Information Mirror

Serial #	Particulars	2002-03	2003-04
1	Total Route Kilometers	2880.07	2854.96
2	Total Track Kilometers	4442.95	4442.95
3	Total numbers of Locomotives	275	273
4	Total numbers of Carriages	1410	1411
5	Total numbers of Wagons	13679	13217
6	Number of Stations	459	459
7	Passenger Carried (Million)	39.2	43.4
8	Passenger-Kilometers (Billion)	4.02	4.34
9	Freight Carried (Million Tons)	3.69	3.47
10	Tons-Kilometers (Million)	952	896
11	Total Operating Revenue (Million Tk.)- without considering PDO & Welfare Grants	4200.90	3941.72
12	Total Operating Revenue (Million Tk.)-Considering PDO & Welfare Grants	5227.10	4975.79
13	Total Operating Expenses (Million Tk.)	5867.10	6394.06
14	Revenue per Passenger-km (Paisha)	38.54	38.20
15	Revenue per Ton-km (Paisha)	146.20	144.80
16	Number of Employees	34727	34168
17	Cost of Employees (Million Tk.)	2451.90	2352.14
18	Total Land (Acres)	East Zone: 24094.087, West Zone: 37505.64	

Source: Railway Information Books, 2003 & 2004