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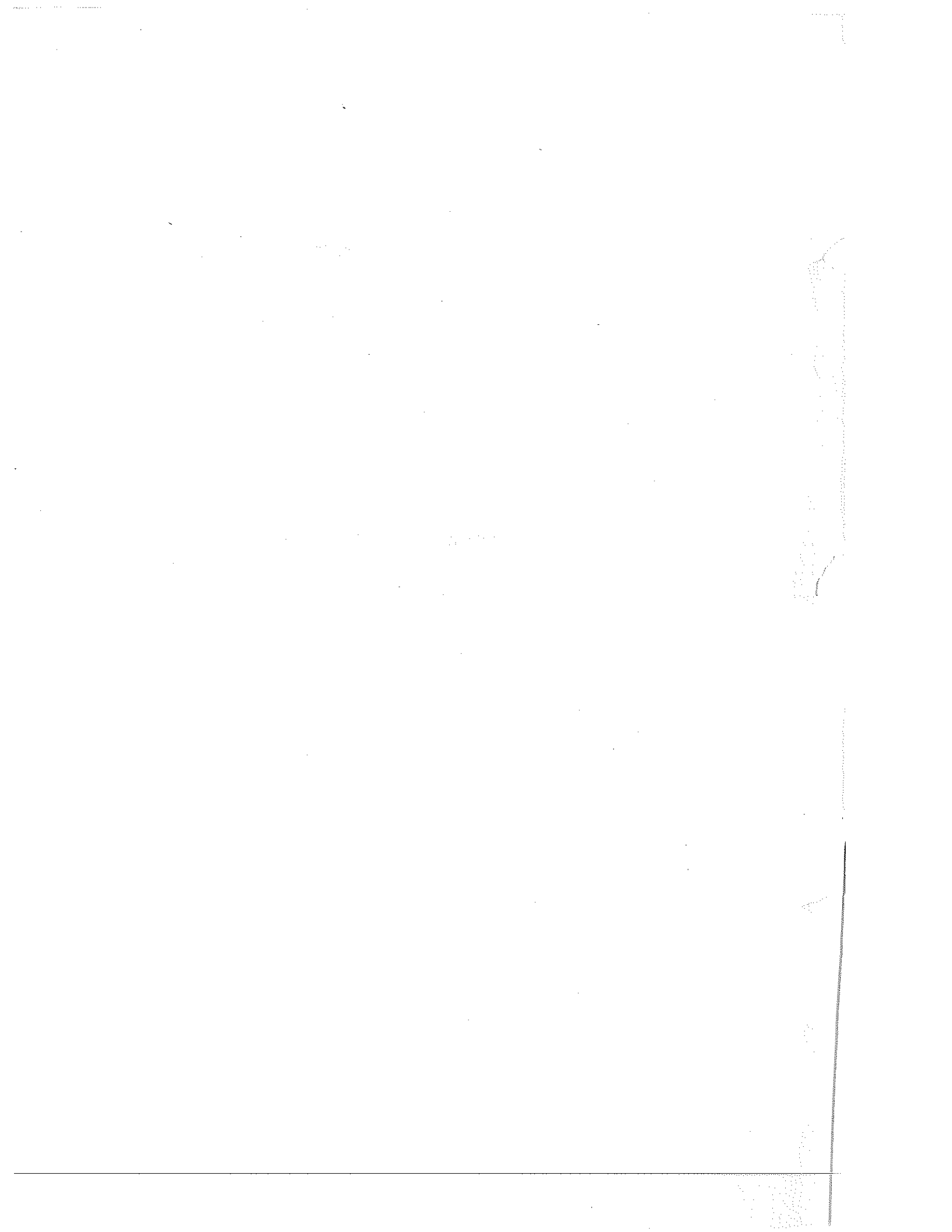
ANALYTICAL REVIEW OF  
RAILWAY STATISTICS

( 1948 - 91 )

NTRC NO: 173

SAJJAD HUSSAIN HUNDAL  
DEPUTY CHIEF

JULY, 1994



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EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Pakistan Railways forms the life line of the country catering to all its needs for large scale movement of freight as well as passenger traffic contributing to economic growth and promoting national integration.

Pakistan Railways, which now comprise 8,775 route kilometres, 841 stations and 54 train halts, was opened for public on 13th May, 1861 between Karachi and Kotri a distance of 169 kilometres. In spite of set-backs on account of two World Wars, the net-work of railway lines continued to grow steadily. At the time of inception of Pakistan the present Railway was named as North Western Railway, in February, 1961 Pakistan Western Railway and in May, 1974, as Pakistan Railways.

The Pakistan Railways was handling 68% of the total freight and 37% of passenger traffic during the second plan. At present, this dropped to 14% of freight and 13% for passenger traffic reelected a situation of declining operationing resources of the Railways despite expansion in the market.

CONCLUDING REMARKS:

1. During 1948-49, the total number of locomotives was 821. Out of which 807 were steam and 14 diesel-electric locomotives. Diesel-Electric traction was introduced in 1952 and since then the number of diesel-electric locomotives has gradually increased from 28 in 1951-52 to 563 in 1991-92. In 1970, the electric traction was introduced between Lahore-Khanewal. The number of electric locomotive remained unchanged till 1991-92. The total number of locomotives has decreased to 752 in 1991-92, out of which 160 were steam locomotives, 563 diesel-electric and 29 electric. Apart from replacing steam locomotives by diesel-electric and electric locomotives in areas of heavy density, a large number of diesel-electric shunters are also being introduced in replacement of steam shunting locomotives. The reduction in the number of steam locomotives has enabled closure of a number of steam locomotive sheds.

2. During 1948-49, the number of passengers carried was 72 million covering 6.466 billion pass-km. The pattern of

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passenger traffic on the Railways has been that the number of passengers increased till 1977-78 when all time high figure of 149 million was attained which then showed gradual decline and was 73.3 Million in 1991-92. However, the passenger kilometres continued to grow to 18.158 billion in 1991-92. The average distance travelled by a passenger which was 86 kilometres in 50's went-up to 248 kilometres in 1991-92. This gives clear indication that while railway has retained long lead traffic, the road has taken away the short lead traffic which previously was moved by rail. The average revenue per passenger increased @ 7.7% during 1948-91.

3. During 1948-49, the tonnes of freight carried was 6.356 million which increased to 7.560 million in 1991-92. The tonne kilometres also increased from 2.740 billion to 5.962 billion during the same period. The tonnes of freight carried was maximum (15.5 million) during 1965-66. The best performance indicator (9.4 billion) was achieved during 1978-79. Eight commodities like

POL, Edible Oil, Cement, Wheat, Rice, Coal, Fertilizer and Iron scrap constitute 73% of the freight traffic while others were 27% only.

4. The freight wagons loaded decreased @ 2.32% per annum and the percentage of empty wagons per train increased from 30% to 42% during last 43 years. Moreover average turn round of wagon (days) has increased @ 1.34% during 1970-91 which shows operational inefficiency of Pakistan Railways.
5. The quantity of foreign coal consumed decreased @ 16.1% per annum during 1948-91, furnace oil @ 2.0% and HSD increased @ 7.58% per annum during 1952-91.
6. The price of foreign coal has increased @ 14.6% per annum during the last 36 years, Furnace Oil @ 10.1% and H.S.D. @ 9.4%. The increase in price of fuels was maximum during 1970-80 and minimum during 1955-70. The cost of electric energy per unit increased @ 16.6% during 1971-91.

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7. The overall growth rate for earnings was 8.5% per annum during the last 43 years. Passengers 8.8%, luggage, parcel 6.3%, freight 8.6% and miscellaneous 8.1%.
8. The overall growth rate for operating expenses was 8.7% per annum during the last 43 years. It grew @ 10.4% per annum for repair and maintenance, operation fuel 7.1%, operation staff 8.9%, operation other than staff/fuel 10.7%, administration 9.8% and for Miscellaneous 0.71% per annum during the same period.
9. During 1948-49, Pakistan Railways had 94,079 persons on its pay rolls, chargeable to revenue account which increased to 134,436 in 1970-71. After this, it declined gradually to 124,436 in 1991-92. The overall growth rate for employee in Railway was 0.65% during 1948-91 and their expenses @ 8.74% per annum during the last 43 years.
12. The route length per thousand employees decreased from 91.8 Km in 1948-49 to 70.5 Km in 1991-92.

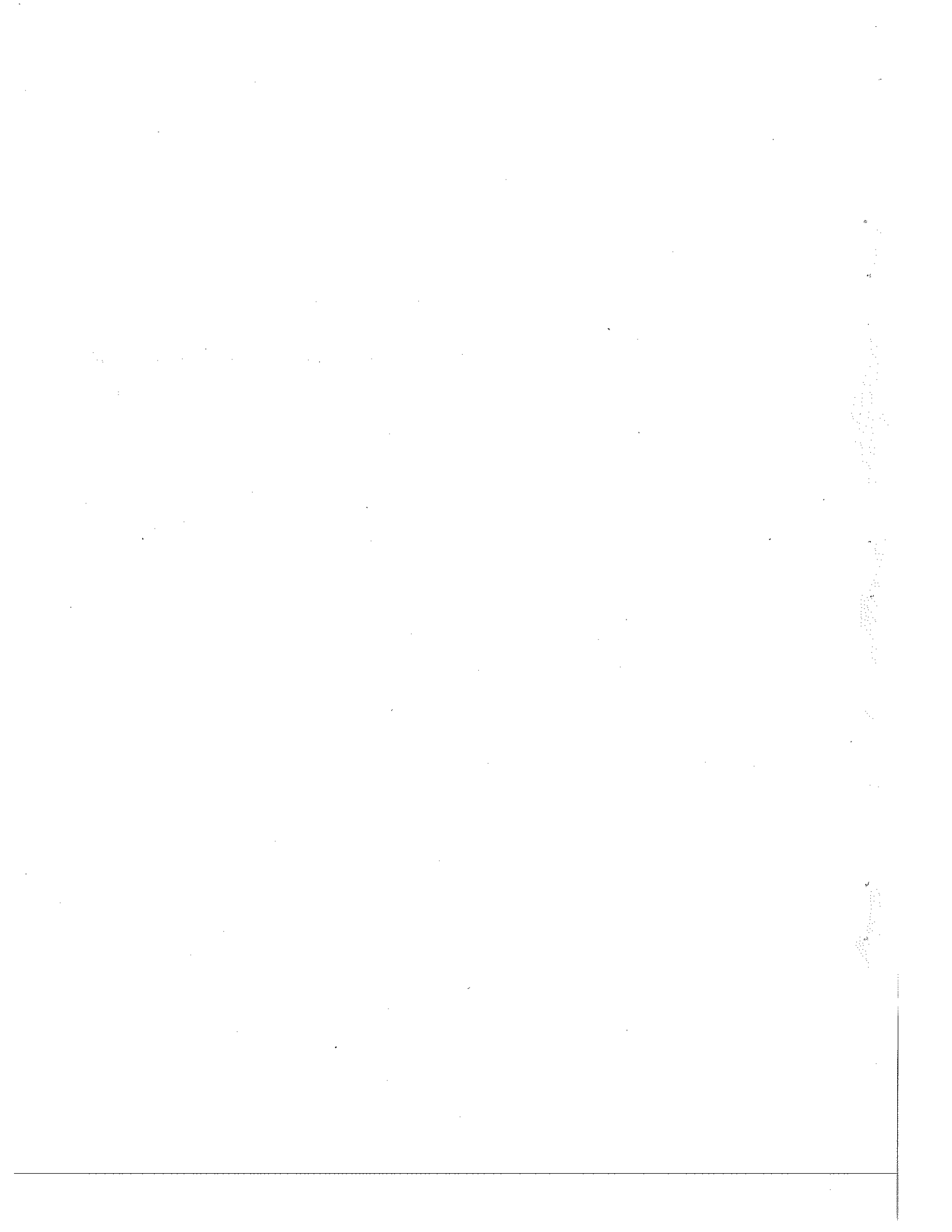
RECOMMENDATIONS:

1. Fare and Rate structure should be at a level which the market can sustain. The present rates were fixed in 1985. Since then, the operating costs have risen by more than 40%. This gap should be gradually reduced by way of an annual upward adjustment of rate and fare.
2. Adequate investment out-lay should be made to cover at least the bare minimum requirements of core investment and maintenance programme.
3. Establishment of Railway Property Board is needed which will facilitate face up-lift of important Railway Stations and help in disciplining the mushroom growth of retailers out-side the stations and on platforms.
4. Railway should be declared as an industry making profits and also exporting industrial equipment and technology.



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5. Marketing has to be accorded the status of a prime management function.
6. All public dealing departments should work under one umbrella and all other departments working like service departments.



CHAPTER - I

INTRODUCTION



CHAPTER - I

INTRODUCTION

Pakistan Railways form the life-line of the nation's transport system and are the largest public sector enterprise in the country. They have to simultaneously function as a public utility service and a commercial undertaking. This dual role imposes on the railways, the obligation to meet the transport requirements of all the sections of the community in conformity with the socio-economic objectives as well as be self sufficient in financial matters.

The performance of Pakistan Railways would have been much better had regular doses of investments been injected in the past in a sustained manner not only for the rehabilitation of the aging assets but for meeting modern day requirements as well. It is basically a government organization charged with the responsibility of meeting the transportation requirements of the nation. It has never operated purely on commercial considerations. Other modes of transport had been encouraged to compete with Railways, rather than supplement its operations.

The quality of service offered by the Railways does not fulfill customers expectations. It is a world-wide phenomenon that users of transport services have a preference for value of time and flexibility of operations. The business community prefer use of road transport which has certain inherent advantages, viz., quicker transit time, immediate availability on demand, facility of direct loading/unloading and a commercial outlook.

Other factors that have contributed to the financial difficulties of Railways are devaluation of Pakistani rupee, international oil price hike, introduction of new pay scales, increase in various allowances, liberalization of pension policy, etc. The cumulative effect of these factors resulted in increased expenditure since 1972. During 1972-90, the expenditure rose 10.6 times while the revenue receipts went up by 7 times only.

Pakistan Railways was a profit making organization till 1971-72, it is now looked upon as a financially losing proposition. The main objective of the study is to review and analyze the performance and finances involved and to establish

relationship between different variables during the last four decades. This will help to determine the causes of deterioration and explore areas of improvement.

In this connection, a number of attempts have been made to improve the operational efficiency of Pakistan Railways but with little success. This is another effort in the same direction. In this case, we shall indicate the inventory, performance indicators, productivity and financial results. By making international comparison of Pakistan Railways and exploring the reasons in which other Railways of the world have played active role for retaining traffic while competing with other modes of transport and to utilize the human and other physical resources in an efficient and effective manner. This will help to develop strategies for improving the quality and efficiency of services.

The Report consists of Four Chapters. Chapter-I, gives the main Introduction to the subject. Chapter-II, Methodology used for the collection and compilation of data. Chapter-III, Analysis of available data. Chapter-IV, Conclusions and Recommendations. The conclusion are drawn on the basis of analysis of data and recommendations based on these inferences.





CHAPTER - II:

METHODOLOGY USED FOR THE STUDY



CHAPTER - II

METHODOLOGY USED FOR THE STUDY

The importance of statistical data can not be over-emphasised in planning and policy formulation. The shortage of statistical data in developing countries is often the basic cause of inefficient planning. A large amount of data is required by researchers, planners, policy-makers and the administrators for carrying out in-depth analysis which is absolutely essential for arriving at accurate conclusions. The need for data increase exponentially as the economy grows and develops complex inter dependencies. Yet considerable data put out by various governmental and other agencies can meet the research and planning requirements to a great extent, provided these are collated in a usable form.

With the establishment of Data Bank the National Transport Research Centre made it as one of its major goals and started collecting, tabulating and compiling the transport statistics in a systematic manner. For this purpose, concerted efforts were made to extract the requisite information directly from the records of various concerned agencies.

In this case, the Study is based on the data available in the year books of Pakistan Railways. The station-wise data is collected by each office of Divisional Superintendent Pakistan Railways. This data is forwarded to Railway Headquarter Lahore for consolidation and publication. The data regarding route/track kilometres, double line track and electrified track, locomotives/ coaching vehicles/freight wagons owned (all-gauges), passenger carried, passenger kilometres class-wise break-down of passenger carried, freight wagons loaded, tonnes of freight carried, tonnes kilometres, commodity-wise break-down of tonnes carried. Passenger/Freight trains run on Pakistan Railways (all-gauges), freight trains operation (broad-gauge), Locomotives/Coaching vehicles/freight wagon usage (broad-gauge). Diesel and electric locomotives usage (broad-gauge), fuel consumed, operating revenue and operating expenses by Pakistan Railway is collected, compiled and published in the year book of information each year and distributed to all concerned.

The Pakistan Railways have compiled and published data classified by departments which is in-sufficient to make international comparison in this particular field. The information regarding category-wise break-up of professional/

technical/administrative staff, like Managers, Accountants, Auditors, Consultants, Experts, Engineers, Doctors, Skilled/Semi-Skilled/Un-Skilled workers indicating their field of expertise, is also not collected and compiled by Pakistan Railways.

It is highly desirable to collect the above mentioned data from the authorities concerned and compile it for publishing in the future year books of Pakistan Railways. This will help to make an International Comparison of Pakistan Railways and explore reasons in which other Railways have played active role for retaining traffic while competing with other modes of transport. This will also provide a strong data base for research, planning and policy making which will help to improve and rehabilitate the overall railway system of the country.

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CHAPTER - III

ANALYSIS OF DATA





CHAPTER - III

ANALYSIS OF DATA

Pakistan Railways is a public sector organization engaged in providing low cost transport facilities to the common man and bulk freight movement over long hauls of essential commodities mostly in public sector on cheaper rates. It thus serves as a catalyst for socio-economic development of other sectors of economy.

For an objective assessment of the present performance, efficiency and financial position of the Railways, it is necessary to view it in its true perspective. Such a perspective would warrant a searching look at the historical factors like the condition of Railway assets, levels of investment in their rehabilitation, influence of general socio-economic factors and Government's policies towards the transport sector in general and Railways' in particular. It has also to be clearly examined whether it has to operate only as a commercial organization guided by profit motives alone or a basic public utility service

providing transport facilities to the common man at low costs. In addition Railways' role as an important defence supporting organization cannot be ignored.

RAILWAY ASSETS:

Pakistan Railways have a route length of 8,775 kilometres with 773 locomotives, 2,474 passenger coaches, 488 other coaching vehicles and 35,842 freight wagons. They operate daily 448 passenger and 150 freight trains carrying 55.8 million passenger kilometres and 20-22 million ton kilometres. There are 907 stations on the system.

ASSETS DETERIORATION:

The productivity of an organization is directly related to the condition of its assets. Unfortunately the rail net-work which was inherited by Pakistan was, comparatively speaking, one of the worse, ill-equipped and less developed systems of the sub-continent. With the exception of a few sections in Sind and Punjab, most of the sections were built purely on strategic considerations and were not provided with facilities from commercial stand point. These sections were also

mainly serving raw-material producing areas with the objective of moving agricultural produce to the rest of India as well as exporting it via Karachi Port.

Out of total stock of 753 locomotives, 160 are steam locomotives, 564 diesel electric and 29 electric. Of 160 steam locomotives all are overage and due replacement, of 564 diesel-electric 31% are overage. Most of the steam locomotives are more than 60 years old as against the normal life of 45 years. Similarly 1/3 of diesel electric locomotives are overage more than 25 years old as against their normal life of 20 years. The motive power and rolling stock is also aging and worn out.

The increase in the number of overage locomotives simply means higher percentage of in-effective locomotives, their doubtful reliability, reduced haulage capacity and increase in the cost of their operation and maintenance. The poor condition of track components like rails and sleepers causes imposition of large number of speed restrictions which retard speed of trains and adversely affect their sectional capacity, punctuality and increase in the turn round time of wagons and locomotive. Increasing percentage of overage assets thus out-paced the

rehabilitation efforts causing the railway performance to stagnate. As a result of these inadequacies and un-satisfactory condition of important assets, Railways has been obliged to operate with less than desired standards of punctuality and customer service. Railways has also been obliged to incur heavy expenditure on the maintenance and up keep of its extensive infrastructure and installation. By far the most important factor which adversely affected the railways has been the unbearable strain of inflation both within and outside the country.

Pakistan Railways are faced with a situation of complete run down physical infrastructure. The rail and sleeper renewals have a back log of 6,235 and 5,235 kilometres respectively. Consequently, there are speed restrictions on 708 kilometres due to unserviceable sleepers and 308 kilometres due to overage rails. This includes 74 kilometres of track on account of unserviceable sleepers and 45 kilometres on account of overage rails on the main line between Karachi and Lala-musa.

The condition of bridges and culverts is also deplorable. There are in all 14,752 bridges of which 2,635 are

on main line. 46.7% of the total bridges are more than 100 years old, 12.6% are between 80-100 years old and 40.7% are between 60-80 years old. The condition on branch lines is similar.

INVENTORY OF ASSETS:

Route Length:

Pakistan Railways is a multi-gauge system and operates on three gauges i.e. broad-gauge, meter-gauge and narrow-gauge. In 1948-49, the total route kilometrage was 8632.96 including 7344.14 kilometres (85%) of broad-gauge, 513.17 kilometres (6%) of metre-gauge and 731.33 kilometres (9%) of narrow-gauge.

The route length increased to 8,775 kilometres upto 1990-91 including 7,718 kilometres (88%) of broad-gauge, 446 kilometres (5%) of metre-gauge and 611 kilometres (7%) of narrow-gauge. 1040 kilometres of broad-gauge are double track including 283 kilometres electrified. This represent, the total point-to-point length of the main and branch lines. It does not include the kilometrage of yard tracks and sidings, nor does it reflect the fact that a kilometre of Railway line may include two or more parallel tracks.

Track Length:

Track constitutes the basic infrastructure of a railway system which has to bear the brunt of transportation of ever increasing traffic being moved in special type of rolling stock on heavy density routes. With the utilisation of powerful diesel and electric locomotives for moving trains at higher speeds, the strain on the track has grown manifold. The building up of a sound and reliable track structure has, therefore, assumed greater importance in the running of the railways.

In 1948-49, Pakistan Railways had a total of 9613.87 kilometres including track on double line, yards and sidings, which increased to 12,622 kilometres in 1991. Out of the total track length, 9,908 kilometres (78.5%) are running track, 2,386 kilometres (18.9%) transportation sidings and 328 kilometres (2.6%) commercial sidings.

Locomotives:

At the time of Independence, there were only steam locomotives using coal supplied exclusively, by mines in India. In January, 1948, the stoppage of the supply of coal by India

created a serious crisis. The conversion of locomotives to the use of oil was undertaken on emergency basis as coal imported from other countries was very expensive.

Table-1: LOCOMOTIVES OWNED BY PAKISTAN RAILWAYS  
(in Number)

YEAR	Broad-Gauge			Metre-Gauge	Narrow-Gauge	Total No.
	Steam No.	Diesel No.	Electric No.	Steam No.	Steam No.	
1	2	3	4	5	6	7
1948-49	732	14	-	25	50	821
1955-56	652	92	-	36	45	825
1960-61	622	206	-	36	39	903
1965-66	623	316	-	46	41	1,026
1970-71	623	402	29	46	41	1,141
1975-76	450	468	29	36	41	1,024
1980-81	381	474	29	35	41	960
1985-86	278	512	29	25	35	879
1990-91	121	564	29	22	17	753

Table-1, reveals that in 1948-49, Pakistan Railways had total number of 821 locomotives. Out of which 807 were steam locomotives (98.3%) and 14 Diesel (1.7%), of the 807 steam locomotives, 732 (90.7%) were for broad-gauge, 25 (3.1%) for metre-gauge and 50 (6.2%) for narrow-gauge while all D.E. locomotives were for broad-gauge. It is evident that maximum number was of steam and minimum of D.E. locomotives.

Diesel-Electric traction was introduced in 1952, and since then number of diesel-electric locomotives has gradually increased from 28 in 1951-52 to 564 in 1990-91 and it grew at an annual growth rate of 8%.

On the introduction of Electric Traction in 1970, 29 electric locomotives were procured for use on Lahore - Khanewal electrified section. The number of electric locomotives remained unchanged till today. All the mail, express (passenger and freight trains) over Lahore - Khanewal Section are being hauled by electric locomotives.

In 1990-91, there were 753 locomotives, out of which 160 were steam locomotives (21.2%), 29 electric (3.9%) and 564 diesel-electric (74.9%). All diesel and electric locomotives



were for broad-gauge. The decrease in number of locomotives is mainly due to the fact that a large number of overage steam locomotives have gone out of operations which has also resulted in closure of a number of steam locomotive sheds.

It is observed that steam motives which were the mainstay of Pakistan Railways once, are being gradually phased out of service giving place to more powerful diesel locomotives. It is expected that steam traction will be eliminated shortly. While as many as 825 steam locomotives of all gauges were on line during the years 1950-55, the current holding is 160 only. Apart from replacing steam locomotives by diesel and electric locomotives in areas of heavy traffic density, a large number of diesel shunters are also being introduced in replacement of steam shunting locomotives. This has enabled Pakistan Railways to improve operational efficiency in both passenger and freight operations.

#### Coaching Vehicles:

Since the inception of Pakistan, efforts are made to reduce over-crowding in trains and to provide greater travel

comforts. Some of the steps taken in this direction were the augmentation of composition of some trains and provision of sleeping berths for lower class passengers on important trains on payment of nominal charges. To combat road competition in respect of passenger traffic, cheap single and return journey fares introduced were also continued. Other amenities were also provided to lower class passengers in the compartments and on platforms at a large number of stations. However, the additions to the passenger fleet have not been commensurate with the growing needs of traffic.

Table-2: COACHING VEHICLES OWNED BY PAKISTAN RAILWAYS  
(In Number)

YEAR	Broad-Gauge		Metre-Gauge		Narrow-Gauge		Total	
	Passenger Carriages	Other Coaching Vehicles	Passenger Carriages	Other Coaching Vehicles	Passenger Carriages	Other Coaching Vehicles	Passenger Carriages	Other Coaching Vehicles
1	2	3	4	5	6	7	8	9
1948-49	2,217	-	105	-	211	-	2,533	-
1955-56	1,466	895	80	27	156	48	1,702	970
1960-61	1,665	1,057	120	27	137	49	1,922	1,133
1965-66	1,861	1,142	126	32	116	46	2,103	1,220
1970-71	1,914	1,074	126	32	114	46	2,154	1,152
1975-76	1,882	927	114	30	112	46	2,108	1,003
1980-81	2,061	691	97	30	110	43	2,268	764
1985-86	2,515	457	87	18	120	31	2,722	506
1990-91	2,189	370	68	10	82	27	2,339	407

NB: Figures from 1948-49 to 1954-55 include other coaching vehicles also.

Table-2, shows that in 1948-49, there were 2,533 coaching vehicles. The pattern of coaching vehicles changed in 1955-56. Each head was classified into two i.e., passenger carriage and other coaching vehicles. Accordingly in 1955-56, there were 2,672 coaching vehicles, consisting of 1,702 passenger carriages (63.7%) and 970 other coaching vehicles (36.3%).

In 1990-91, the coaching stock of 2,746 vehicles included 2,339 passenger coaches (83.5%) and 488 others coaching vehicles (16.5%). The passenger coaches were used for conveyance of passengers and other coaching vehicles for luggage, parcels, mails, automobiles, horses etc as well as departmental vehicles. The air conditional passenger coaches operating between important towns are also included in it.

The number of passenger coaches continued to grow from 1,702 in 1955-56 to 2,339 in 1990-91 while the other coaching vehicles decreased from 970 in 1955-56 to 407 in 1990-91. Additions to the passenger fleet have, however, not commensurate with the growing needs of traffic. Financial constraints and limitations in production capacity available in the country have restricted the replacement of existing overage coaches.

Table-3 FREIGHT WAGONS OWNED BY PAKISTAN RAILWAYS  
(In Number)

YEAR	Broad-Gauge (No)	Metre-Gauge (No)	Narrow-Gauge (No)	Total (No)
1	2	3	4	5
1948-49	22,506	696	613	23,815
1955-56	23,357	970	608	24,951
1960-61	28,045	1,060	605	29,710
1965-66	33,414	1,073	561	35,048
1970-71	35,700	1,073	564	37,337
1975-76	35,361	1,013	564	36,938
1980-81	34,713	989	519	36,248
1985-86	34,184	654	399	35,237
1990-91	33,947	604	300	34,851

Table-3 indicates that the number of freight wagons owned by the Pakistan Railway at the end of 1948-49 was 23,815 comprising of 14,289 covered wagons, 5,239 opens, 3,572 special type (for carriage of liquids, explosives, machinery, live-stock, timber, rails etc) and 715 departmental wagons. 22,743 of these wagons were 4-wheelers, the rest were mostly 8-wheelers. Out of 23,815 wagons in 1948-49 (94.5%) were for broad-gauge (2.9%) for metre-gauge and (2.6%) for narrow-gauge.

It increased to 34,851 upto mid 1991 comprising 21,578 covered wagons 8,338 open wagons, 3,871 special type and 1,064 departmental wagons and does not include 466 brake-vans. 31,107 of these wagons are 4-wheelers, the rest are mostly 8-wheelers.

Out of total 34,851 wagons, 33,947 wagons (97.41%) were for Broad-Gauge, 604 for Metre-Gauge (1.73%) and 300 for Narrow-Gauge (0.86%). It is evident that share of freight wagons for broad-gauge has increased from 94.5% to 97.4% during 1948-91 while other categories have decreased significantly.

The number of freight wagons for broad-gauge were maximum in 1969-70 then it started declining gradually upto 1990-91. The wagons for Metre-Gauge was maximum during the period 1962-73 and were 1,073 in number. After this, it decreased to 604 in 1990-91. It decreased gradually from 1972-73 to 1990-91 at an annual decline rate of 3.2%. The number of freight wagon for narrow-gauge was maximum from 1948-49 to 1954-55 then it started declining at an annual compound growth rate of 2.09%. It decreased from 608 in 1955-56 to 300 in 1990-91.

#### PERFORMANCE OF RAILWAYS

The performance of Pakistan Railways is on the decline. They had a budget deficit of Rs.2.76 billion in 1988-89 and Rs.2.17 billion in 1989-90, after taking into account interest and depreciation. Their assets are aging and are unable to

provide for their replacement, renewal and improvement. On the other hand, indiscriminate subsidies by the government are neither desirable nor possible.

Pakistan Railway operates 448 coaching and 150 goods trains daily. Nearly 72% of the operating effort is consumed by passenger services while only 28% is left for the freight sector where again there is competition with the road sector. While the road hauliers do not share the cost of infrastructure, Railway has to pay for the entire set-up. Against this, the share of Railways in government investment through Five Year Plans has persistently been on the decline. Railway in Pakistan is today suffering from aging assets and lack of timely investment.

#### PASSENGER TRAFFIC:

The pattern of passenger traffic on the Railways has been that the number of passengers showed increase till 1977-78 when all time high figure of 149 million was attained which then showed gradual decline and the figure during 1990-91 was 85 million. The passenger kilometres, however, continued to grow till 1990-91 when these were 19.964 billion. The average distance travelled by a passenger which was 86 kilometres in 50's

went up to 235 kilometres in 1990-91. This gives a clear indication that while Railways has retained long distance traffic, the road has taken away almost 45% of the short lead traffic which was previously moved by rail.

Railway being a cheap and the major mode of transport for the poor masses, has been obliged to give preferential treatment for passenger traffic in allocation of its resources thereby relegating the freight movement to secondary importance. As a result, relatively better type of locomotives are utilised on passenger trains to provide as reliable a service as possible. This leaves relatively poor type of locomotives for dedication to 'goods pool' for freight traffic. This has caused severe setback to the freight moving capacity of the entire system and also progressively diverted the private sector goods traffic away from the Railways.



Table-4: PASSENGERS CARRIED BY PAKISTAN RAILWAYS

YEAR	Number of Passengers Carried (000)	Total Passenger Kilometres (000)	Average Number of Kilometres Travelled by a Passenger	Average Revenue per Passenger (Rupees)
1	2	3	4	5
1948-49	71,654	6,465,629.59	90.23	1.43
1955-56	87,195	7,098,063.35	81.40	1.56
1960-61	124,737	9,203,278.42	73.78	1.50
1965-66	122,896	9,664,154.00	78.73	1.72
1970-71	126,178	9,329,370.00	73.9	2.06
1975-76	147,317	12,956,673.00	87.9	3.06
1980-81	123,002	16,387,174.00	133.2	8.87
1985-86	82,928	16,849,639.00	203.2	18.83
1990-91	84,899	19,963,696.00	235.2	27.72
		(ACGR %)		
1948-1955	2.84	1.34	- 1.48	1.25
1955-1960	7.42	5.33	- 1.98	0.79
1960-1965	- 0.29	0.98	1.31	2.77
1965-1970	0.53	0.71	- 1.27	3.67
1970-1975	3.15	6.79	3.53	8.24
1975-1980	- 3.67	4.81	8.67	23.72
1980-1985	- 8.20	0.56	8.81	16.25
1985-1990	0.47	3.45	2.97	8.04
Overall	0.40	2.72	2.31	7.31

Table-4 reveals that during the year 1948-49, Pakistan Railways carried 72 million passengers making a total of 6465 million passenger kilometres averaging 90.23 kilometres per passenger. These figures include passenger travelling on reduced fare tickets but exclude those travelling on free passes.

During 1990-91, it increased to 85 million passengers making a total of 19.964 million passenger kilometres averaging 235.2 kilometres per passenger.

The number of passengers had a maximum growth rate during 1955-60 and minimum during 1980-85. There was a highest growth rate in performance indicator regarding passenger kilometres during 1970-75 and minimum during 1948-50. While it was maximum for average distance travelled per passenger during 1980-85 and minimum during 1950-55 where-as average revenue per passenger was maximum during 1975-80 and minimum during 1955-60. The overall growth rate for passenger carried during 1948-91 was 0.4%, for passenger kilometre 2.72%, distance travelled per passenger 2.30% and for average revenue per passenger was 7.3%. Under the circumstance it is highly desirable to enhance the fare

rates to improve the revenue position in the forth coming time. This will lessen the burden of providing subsidies to the Railways by the Government.

CLASS-WISE BREAK DOWN OF PASSENGERS CARRIED:

It is generally said that for comparable classes, Railway provide safer and better quality of services considering that it offers more space to move around, with room for luggage, and special care for women and children.

During the year 1948-49, the total number of passengers carried by Pakistan Railways was 71,654 thousands. Out of which 68,034 thousand (94.95%) travelled in third class, 2945 thousand (4.11%) in inter class, 606 thousand (0.84%) in second class and 69 thousand (0.10%) in first class. The number of passengers increased till 1977-78 at an annual growth rate of 2.54%. After this, it showed a gradual decline and decreased at an annual decline rate of 5.3%. The overall growth rate during the period was 0.4%.

During the year 1977-78, the total number of passengerscarried was 149,000 thousand which was maximum since

1948. All the classes were re-designated as 3rd class into second class, Inter-class into first class, upper class rail cars and Air-conditioned class. Out of total number 143,852 thousands (96.54%) travelled in second class, 4994 thousand (3.35%) in first class 71 thousand (0.05%) in upper class rail car and 83 thousand (0.6%) in airconditioned.

During the year 1990-91, the total number of passengers carried was 84,899 thousand. Out of which 71,883 thousand (84.67%) travelled in second class, 9478 thousand (11.16%) in Economy Class, 195 thousand (0.23%) in Air Conditional Lower, 2339 thousand (2.76%) in Sitter First Class, 615 thousand (0.72%) in Sleeper First Class, 316 thousand (0.37%) in Sitter Air Conditional Class and 73 thousand (0.09%) in Sleeper Air Conditional Class. It is evident that from 1948-49 to 1990-91 the percentage of passengers who travelled in third class (now designate as second class) was around 96% of the total. The passengers in airconditioned class was negligible but has also increased. The passengers in inter-class (now designated as first class sitter) has decreased. The other categories are insignificant.

It can be concluded that since the inception of Pakistan more than 95% of passengers travelled in third (now second class) and less than 5% by other classes.

FREIGHT WAGONS LOADED:

The data regarding number of freight wagons loaded by Pakistan Railways, was not available upto June, 1955. During 1955-56, the total number of 943,930 wagons were loaded on the entire system. 861,816 were for broad-gauge, 58,532 for metre-gauge and 23,582 for narrow-gauge.

During 1990-91, a total of 430,026 wagons were loaded on the entire system. These figures do not include wagons received from foreign railways. 429,177 wagons (99.8%) were loaded for broad-gauge 658 (0.1%) for metre-gauge and 191 (0.1%) for narrow-gauge. The overall decline rate during 1956-90 was 1.74% per annum, 1.47% for broad-gauge, 13.21% for metre-gauge and 13.16% for narrow-gauge. It is evident that freight wagons loaded for metre and narrow-gauge decreased at a faster rate than those loaded for broad-gauge. It is observed that more than 90% of freight wagons loaded are using the Main Corridor between Karachi- Lahore - Peshawar while the remaining less than 10% the branch lines.

TONNES OF FREIGHT CARRIED:

The growth of freight traffic in Pakistan indicates that it has gone along with the economic development of the country. Considering land transport (road plus rail) as a whole, freight traffic grew between 1982-83 from 28.5 billion ton-kilometres to 41.0 billion ton-kilometres in 1988-89. Most of the growth was captured by road transport whose participation increased from 74% in 1982-83 to 80% in 1988-89. Rail traffic growth was slow. It grew at a compound growth rate of about 2.16% reaching 8.4 billion ton-kilometre by 1988-89.

Table-5: TONNES OF FREIGHT CARRIED BY PAKISTAN RAILWAYS

YEAR	TONNE CARRIED (000)			Tonne-Kilometres (000)	Average Kilometres Travelled by a Tonne	Average Rate Charged per Tonne (Paisa)	Average Revenue per Tonne (Rs.)
	Public Goods	Department	Total				
1	2	3	4	5	6	7	8
1948-49	6,356	-	6,356	2,740,224.8	431.12	3.9	16.8
1955-56	10,652	-	10,652	4,627,201.2	434.40	4.2	18.2
1960-61	12,205	1,282	13,487	6,647,717.4	492.90	9.8	18.6
1965-66	14,300	1,208	15,508	7,639,310.9	492.60	10.5	19.8
1970-71	10,750	1,794	12,544	7,493,791.0	597.40	5.2	30.9
1975-76	10,108	5,205	15,313	9,096,751.0	594.05	10.8	63.9
1980-81	8,330	3,041	11,371	7,917,739.0	696.31	19.5	135.9
1985-86	9,063	2,742	11,805	8,269,811.0	700.53	22.7	180.4
1990-91	6,716	1,001	7,717	5,708,551.0	742.30	40.7	300.9

\* NB: Break-up for Public and Departmental Goods is not available upto 1959-60

(ACGR %)

1948-55	7.66	-	7.66	7.77	0.11	1.06	1.15
1955-60	2.76	-	4.83	7.52	2.56	18.47	0.44
1960-65	3.22	- 1.20	2.83	2.82	- 0.08	1.38	1.26
1965-70	-5.87	8.23	- 4.33	- 0.39	3.93	-15.09	9.31
1970-75	-1.24	23.74	4.07	3.95	- 0.11	15.74	15.64
1975-80	-3.95	-11.35	- 6.13	- 2.82	3.23	12.54	16.29
1980-85	1.70	- 2.09	- 0.75	0.87	0.12	3.09	5.83
1985-90	-6.18	-22.33	- 8.87	- 7.69	1.17	12.39	10.77
OVERALL	0.13	- 0.83	0.46	1.76	1.30	5.74	7.11

Table-5 shows that during 1948-49, the total number of tonnes of freight carried by Pakistan Railway was 6.356 million making a total of 2.740 billion tonne kilometres averaging 431.12 kilometres travelled by a tonne. The average rate charged per tonne per kilometre was Paisa 3.90 and the average revenue earned per tonne was Rs.16.8. The traffic carried free of charge is not included in these figures. The break-up of freight carried on departmental account is not available upto 1959-60.

During 1990-91, the total number of tonnes of freight carried by Pakistan Railway was 7.717 million, out of which 6.716 million were carried on public and 1.001 million on departmental account. The total number of tonne kilometres was 5.709 billion averaging 742.30 kilometres travelled by a tonne. The average rate charged per tonne per kilometre was paisa 40.7 and average revenue earned per tonne was Rs.300.9.

The highest freight tonnage carried was 15.5 and 15.3 million during 1965-66 and 1975-76 respectively. The best performance indicator tonne kilometres 9.4 and 9.1 billion tonne kilometres were achieved during 1978-79 and 1975-76 by Pakistan Railways. During 1948-66, the tonnes of freight carried by



Pakistan Railways increased at an annual growth rate of 4.76%, tonne kilometres 6.23% and average kilometres travelled by a tonne 0.76% respectively. During 1965-75, the tonnes of freight carried remained almost constant while tonne kilometre and average kilometres travelled by a tonne increased by 1.77% and 1.88% per annum respectively. During 1975-76, the tonnes kilometres was at maximum level subsequently it had gradually declined at an annual rate of 3%.

The overall average annual compound growth rate for tonnes of freight carried during 1948-91 was 0.46%, tonne kilometres 1.76%, distance travelled by a tonne 1.3%, average rate charged 5.74% and average revenue earned per tonne 7.1%.

Fortunately, considerable volume of traffic in Pakistan is captive traffic for railways, by dint of its nature or because of movement pattern and long leads involved. Railway should try to carry this traffic in large volume within the same resources by making its strategies more productive and cost reducing.

Conceding that considerable portion was short or medium distance traffic, with a large spread out, a sizeable additional

volume could have been rail borne if the Railway had the ability to carry it. Efforts should be made to plan for a shift of some traffic from road to rail on the one-hand and to cater for the growth of traffic in years to come. Eight commodities like POL, Edible Oil, Cement, Rice, Coal, Fertilizer and Iron scrap constitute 73% of the traffic while the remaining others were 27% only.

Table-6: PASSENGER TRAINS RUN ON PAKISTAN RAILWAYS (ALL-GAUGES)  
Number of Trains Run

YEAR	PASSENGER				MIXED			GRAND
	Steam	Diesel	Electric	Total	Steam	Diesel	Total	TOTAL
1	2	3	4	5	6	7	8	9
1948-49	-	-	-	27,715	-	-	33,178	60,893
1955-56	-	-	-	53,235	-	-	42,212	95,447
1960-61	33,620	30,124	-	63,744	39,324	3,675	42,999	106,743
1965-66	52,541	68,140	-	120,681	23,703	2,022	25,725	146,406
1970-71	40,321	71,322	4,834	116,477	31,691	4,000	35,691	152,168
1975-76	24,559	97,256	8,296	130,111	24,554	8,688	33,242	163,353
1980-81	26,475	103,855	8,647	138,977	20,528	4,645	25,173	164,150
1985-86	16,955	101,039	5,394	123,388	17,261	9,545	26,806	150,194
1990-91	6,756	104,365	5,022	116,143	10,864	18,223	29,087	145,230

(ACGR %)

1948-55	-	-	-	9.77	-	-	3.50	6.63
1955-60	-	-	-	3.67	-	-	0.37	2.26
1960-65	9.34	17.73	-	13.62	-10.65	-12.69	-10.82	6.52
1965-70	- 5.44	0.92	-	- 0.71	5.98	14.62	6.77	0.77
1970-75	-10.42	6.40	11.40	2.24	- 5.24	16.78	- 1.43	1.43
1975-80	1.51	1.32	0.83	1.33	- 3.65	-13.34	- 5.67	0.10
1980-85	- 9.32	- 0.55	- 9.90	- 2.41	- 3.53	15.49	1.26	1.79
1985-90	-20.20	0.65	- 1.44	- 1.22	- 9.70	13.81	1.65	0.67
OVERALL	- 5.49	4.23	0.19	3.47	- 4.38	5.48	- 0.31	2.09

(Contd.)

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PASSENGER TRAIN RUN ON PAKISTAN RAILWAYS (ALL GAUGES)

YEAR	Total No. of Kilometres Covered by Passenger and Mixed Trains (000)				Number of Rail Cars Run	Car Kilometre (000)
	Steam	Diesel	Electric	Total		
1	2	3	4	5	6	7
1948-49	-	-	-	15,224	-	-
1955-56	-	-	-	21,844.5	-	-
1960-61	4,306.5	9,669.1	-	24,275.6	-	1,906.2
1965-66	12,580.5	17,452.4	-	30,032.9	21,818	2,271.7
1970-71	10,338.0	20,001.0	1,170	31,509.0	46,960	5,559.0
1975-76	7,767.0	24,460.0	2,148	34,375.0	37,252	3,907.0
1980-81	6,508.0	27,294.0	2,204	36,006.0	30,336	2,716.0
1985-86	5,806.0	28,428.0	1,319	35,553.0	20,622	1,814.0
1990-91	2,120.0	32,366.0	1,695	36,181.0	9,898	753.0

(ACGR %)

1948-55	-	-	-	5.29	-	-
1955-60	-	-	-	2.13	-	-
1960-65	23.91	12.54	-	4.35	-	3.57
1965-70	- 4.00	2.76	-	0.96	16.57	19.60
1970-75	- 5.89	4.11	12.92	1.76	- 4.74	- 7.31
1975-80	- 3.60	22.17	0.51	0.93	- 4.19	- 7.54
1980-85	- 2.31	0.82	-10.81	0.25	- 8.02	- 8.41
1985-90	-22.32	2.63	5.14	0.35	-15.81	-19.23
OVERALL	- 2.39	4.11	1.87	2.08	- 3.21	- 3.14

Table-7: FREIGHT TRAINS RUN ON PAKISTAN RAILWAYS (ALL-GAUGES)

YEAR	NUMBER OF FREIGHT TRAINS RUN				TOTAL KILOMETRES COVERED BY FREIGHT TRAINS (000)			
	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total
1	2	3	4	5	6	7	8	9
1948-49	-	-	-	46,614	-	-	-	6,138.9
1955-56	-	-	-	75,502	-	-	-	11,403.6
1960-61	63,772	22,733	-	86,505	7,509.0	6,444.8	-	13,953.8
1965-66	57,866	32,055	-	89,921	5,854.0	9,165.7	-	15,019.7
1970-71	41,751	31,849	2,807	76,407	3,243.0	9,083.0	739	13,065.0
1975-76	28,604	38,874	4,588	72,066	1,344.0	11,105.0	1,271	13,720.0
1980-81	21,715	36,421	4,298	62,434	841.0	10,956.0	1,155	12,952.0
1985-86	18,926	34,302	4,109	57,337	559.0	10,763.0	1,131	12,453.0
1990-91	327	36,865	1,998	39,190	176.0	9,456.0	530	10,162.0

(ACGR %)

1948-55	-	-	-	7.13	-	-	-	13.19
1955-60	-	-	-	2.76	-	-	-	4.12
1960-65	- 1.96	7.11	-	0.78	- 5.10	7.30	-	1.48
1965-70	- 6.75	-0.13	-	- 3.31	-12.54	-0.18	-	- 2.83
1970-75	- 7.86	4.07	10.33	- 1.18	-19.26	4.10	11.46	0.98
1975-80	- 5.67	-1.31	- 1.31	- 2.91	- 9.83	- 0.27	- 1.93	- 1.16
1980-85	- 2.79	-1.21	- 0.90	- 1.72	- 8.51	- 0.36	- 0.42	- 0.79
1985-90	-251.66	1.45	-15.51	- 7.90	-26.00	- 2.62	-16.37	- 4.15
OVERALL	- 19.22	1.62	- 1.71	- 0.41	-13.33	1.29	- 1.67	1.21

(Contd.)

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FREIGHT TRAINS RUN ON PAKISTAN RAILWAYS (ALL GAUGES)

YEAR	AVERAGE NUMBER OF WAGONS ON EACH FREIGHT TRAINS (IN-TERM OF 4-WHEELERS)				TOTAL NUMBER OF KILOMETRES TRAVELLED BY WAGONS ON FREIGHT AND MIXED TRAINS. (000)			
	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total
1	2	3	4	5	6	7	8	9
1948-49	-	-	-	43.3	-	-	-	282,060.7
1955-56	-	-	-	43.2	-	-	-	510,589.8
1960-61	37.1	58.6	-	47.1	294,483.5	379,613.9	-	674,097.4
1965-66	32.9	56.0	-	47.0	201,340.2	513,340.4	-	714,680.6
1970-71	23.8	56.0	58.6	49.4	102,137.0	510,911.0	41,598	654,646.0
1975-76	24.9	54.7	60.6	52.3	40,258.0	611,931.0	77,081	729,270.0
1980-81	30.5	53.1	57.2	52.0	29,954.0	584,603.0	66,088	680,645.0
1985-86	28.9	57.2	61.1	56.5	23,086.0	612,990.0	69,129	705,205.0
1990-91	27.9	55.9	63.0	56.1	2,218.0	509,519.0	33,403	545,140.0

(ACGR %)

1948-55	-	-	-	-	-	-	-	12.60
1955-60	-	-	-	1.74	-	-	-	5.71
1960-65	-2.43	-0.91	-	-	-7.90	6.22	-	1.18
1965-70	-6.69	-	-	1.00	-14.54	-0.95	-	1.77
1970-75	0.91	-0.47	0.67	1.15	-20.47	3.67	13.13	2.18
1975-80	4.14	-0.60	-1.16	-	6.09	-0.92	-3.13	1.39
1980-85	-1.08	1.50	1.33	1.67	-5.35	0.95	0.90	0.71
1985-90	-0.71	-0.46	-0.46	-0.14	-59.76	-3.77	-15.66	5.28
OVERALL	-0.95	-0.16	0.36	0.62	-17.70	0.99	-1.10	1.58

Table-8: FREIGHT TRAINS OPERATION (BROAD GAUGE)

(SPEED) (KILOMETRES)

YEAR	THROUGH GOODS TRAINS				ALL GOODS TRAINS			
	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total
1	2	3	4	5	6	7	8	9
1948-49	-	-	-	-	-	-	-	15.9
1955-56	-	-	-	20.0	-	-	-	16.3
1960-61	16.6	22.7	-	20.3	13.1	20.8	-	15.9
1965-66	15.9	19.6	-	18.7	13.3	18.2	-	16.0
1970-71	16.1	20.0	21.6	19.6	14.0	18.8	19.8	17.5
1975-76	15.7	19.8	19.6	19.8	14.4	18.8	19.2	18.3
1980-81	15.2	19.4	18.6	19.3	13.3	18.6	18.3	18.2
1985-86	14.5	19.3	16.7	19.0	11.9	18.6	17.0	17.9
1990-91	15.7	19.5	14.4	19.1	13.4	19.1	14.4	18.7

(Contd.)

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**FREIGHT TRAINS OPERATION (BROAD-GAUGE)**  
(Wagons per Train)

YEAR	(In Number)										
	TOTAL				LOADED				NET LOAD	NET TONNE	
	Steam (No)	Diesel (No)	Electric (No)	Total (No)	Steam (No)	Diesel (No)	Electric (No)	Total (No)	PER TRAIN (TONNES)	PER TRAIN KILOMETRES PER HOUR.	
1	2	3	4	5	6	7	8	9	10	11	
1948-49	-	-	-	44.0	-	-	-	30.8	403	6,689.6	
1955-56	-	-	-	44.4	-	-	-	30.1	386	6,739.5	
1960-61	38.2	58.6	-	58.0	27.5	40.3	-	33.7	456	7,832.7	
1965-66	33.8	56.0	-	48.1	23.7	36.9	-	32.1	513	8,596.0	
1970-71	30.8	56.0	58.6	50.6	20.2	36.6	38.0	33.0	565	10,692.0	
1975-76	25.8	54.1	59.5	52.3	17.9	34.6	32.3	33.0	613	11,968.0	
1980-81	31.1	53.1	57.2	52.1	20.4	29.7	32.5	29.4	582	10,905.0	
1985-86	27.9	57.2	61.1	56.2	20.0	31.7	35.8	30.0	637	11,667.0	
1990-91	39.5	55.9	63.0	56.2	28.6	29.4	31.5	21.9	565	11,130.0	



Table-9: COACHING VEHICLES USAGE (BROAD-GAUGE)

YEAR	VEHICLE-KILOMETRES PER DAY PER VEHICLE ON LINE. (IN TERMS OF 4-WHEELERS)		PERCENTAGE OF AVERAGE NUMBER OF VEHICLES UNDER OR AWAITING REPAIRS DAY (IN UNITS) TO AVERAGE TOTAL NUMBER ON LINE	
	PASSENGER CARRIAGE	OTHER COACHING VEHICLES	PASSENGER CARRIAGE	OTHER COACHING VEHICLES
1	2	3	4	5
1948-49	-	-	-	-
1955-56	276.9	61.2	15.9	7.2
1960-61	291.4	67.6	12.3	9.3
1965-66	301.1	64.4	11.1	10.7
1970-71	291.0	89.0	14.3	12.1
1975-76	327.0	82.0	19.6	30.2
1980-81	342.0	109.0	20.8	19.2
1985-86	324.0	37.0	15.8	13.3
1990-91	365.0	113.0	25.7	8.2
OVERALL (ACGR %)	0.79	1.77	1.38	0.38

Table-10: FREIGHT WAGON USAGE (BROAD-GAUGE)

YEAR	Wagon-Kilometres per day per Wagon on line (in terms of 4-Wheelers)	Percentage of average number of unserviceable wagons daily (in terms of 4-Wheelers) to average total No. on line.	Average Wagon Load	Net Tonne Kilometres per Wagon day	Average turn round of wagons (days)
1	2	3	4	5	6
1948-49	39.9	10.2	14.4	402.5	-
1955-56	58.4	5.9	13.5	561.9	-
1960-61	62.5	5.9	14.2	637.6	-
1965-66	56.6	2.1	16.3	633.0	-
1970-71	49.2	3.8	17.7	272.0	12.1
1975-76	57.5	5.3	19.2	693.0	16.1
1980-81	54.1	7.2	20.0	621.0	14.7
1985-86	53.0	5.6	20.2	624.0	18.3
1990-91	42.1	11.9	19.5	441.0	18.6
OVERALL (ACGR %)	0.13	0.37	0.72	0.22	2.17

Table-11: LOCOMOTIVE USAGE (BROAD-GAUGE)

YEAR	Engine-Kilometres per day per engine on line				Engine-Kilometres per day per engine in use							
	All Engines				All Engines				All Engines			
	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total	Steam	Diesel	Electric	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1948-49	-	-	-	96.6	-	-	-	161.0	-	-	-	-
1955-56	-	-	-	149.7	-	-	-	188.4	-	-	-	175.5
1960-61	127.2	284.97	-	162.6	164.2	330.1	-	206.1	124.0	262.4	-	161.8
1965-66	113.0	261.0	-	163.0	135.0	291.0	-	192.0	97.0	204.0	-	140.0
1970-71	90.0	254.0	190.0	153.0	132.0	299.0	262.0	204.0	92.0	185.0	127.0	142.0
1975-76	89.0	248.0	332.0	172.0	132.0	296.0	381.0	227.0	113.0	187.0	238.0	174.0
1980-81	87.0	256.0	326.0	182.02	126.0	306.0	319.0	237.0	75.0	192.0	243.0	167.0
1985-86	85.0	249.0	239.0	185.0	140.0	395.0	287.0	247.0	128.0	208.0	228.0	200.0
1990-91	57.0	256.0	215.0	219.0	107.0	326.0	274.0	295.0	67.0	216.0	134.0	205.0
OVERALL (ACGR %)	-2.71	-0.36	0.62	1.97	-1.44	-0.04	0.22	1.45	-2.07	-0.65	0.27	0.37

(Contd.)

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LOCOMOTIVE USAGE (BROAD-GAUGE)

YEAR	! Percentage of average number ! of engines under or awaiting ! repairs daily to average total ! number on line.				! Hours Worked per day per ! engine available for use			
	! Steam	! Diesel	! Electric	! Total	! Steam	! Diesel	! Electric	! Total
1	2	3	4	5	6	7	8	9
1948-49	-	-	-	15.7	-	-	-	7.4
1955-56	-	-	-	11.9	-	-	-	10.4
1960-61	17.5	12.1	-	16.3	11.6	16.1	-	12.7
1965-66	9.5	9.9	-	9.7	9.8	14.6	-	11.4
1970-71	14.4	14.2	11.7	14.3	9.2	14.5	10.8	11.2
1975-76	16.7	15.8	8.7	16.0	9.4	15.0	16.6	12.3
1980-81	18.8	15.4	16.6	17.0	9.0	14.9	17.3	12.4
1985-86	22.3	15.5	16.4	18.1	10.0	15.6	16.4	12.7
1990-91	23.9	21.0	21.7	21.6	6.7	16.2	12.2	14.3
OVERALL (ACGR %)	1.04	1.85	3.14	0.76	-1.85	0.02	0.61	1.58

Table-12: FUEL CONSUMPTION

YEAR	COAL (TONNES)		FURNACE OIL		H.S.D. OIL (TONNES)	
	Locomotive Purposes	Other than Locomotive Purposes	Locomotive Purposes	Other than Locomotive Purposes	Locomotive Purposes	Other than Locomotive Purposes
1	2	3	4	5	6	7
1948-49	648,633	41,162	113,059	8,836	-	-
1955-56	157,511	47,097	420,829	28,349	23,596	11
1960-61	106,002	37,898	476,153	36,411	60,476	180
1965-66	33,391	22,868	494,774	39,012	105,930	1,047
1970-71	26,337	10,634	425,133	34,037	119,356	1,647
1975-76	6,491	4,775	329,026	27,015	141,927	2,343
1980-81	NIL	2,305	257,786	21,820	144,229	1,703
1985-86	NIL	2,351	195,551	17,120	153,373	4,390
1990-91	NIL	1,134	74,564	7,474	152,753	4,254

Table-12, indicates that during 1948-49, the Pakistan Railways consumed 689,795 tonnes of coal and 121,895 tonnes of furnace oil. These quantities comprised the entire fuel consumed on the railways i.e. on locomotives, power houses, water pumps, workshops etc. Prior to 1952-53, there was no consumption of diesel oil for locomotive and other locomotive purposes.

During 1955-56, the Pakistan Railways consumed 204,608 tonnes of coal, 449,178 tonnes of furnace oil and 23,607 tonnes of diesel oil. The average price of these fuels during the year was Rupees 38.13 per tonne for foreign coal, Rupees 91.4 per tonne for fuel oil and Rupees 244.21 per tonne for diesel oil.

During the year 1990-91, the Pakistan Railways consumed 1,134 tonnes of coal, 82,038 tonnes of furnace oil and 157,007 tonnes of H.S.D. oil. The average price of these fuels at receiving points during the year was Rs.4106.2 per tonne for foreign coal, Rs.2625.19 per tonne for the furnace oil and Rs.5738.67 per tonne for H.S.D. oil. The cost of electric energy per unit was Rs.1.21.

QUANTITIES OF FUEL CONSUMED  
(In Tonnes)

Year	Coal		Furnace Oil		H.S.D. Oil	
	Quantity	ACGR (%)	Quantity	ACGR (%)	Quantity	ACGR (%)
1	2	3	4	5	6	7
1955-56	204,608	(-12.1)	449,178	(+00.15)	23,607	(+11.5)
1970-71	36,971	(-31.9)	459,170	(-5.09)	121,003	(+ 1.9)
1980-81	2,305	(- 7.4)	279,606	(-13.05)	145,932	(+ 0.73)
1990-91	1,134		82,038		157,007	
Overall		(-16.00)		(- 4.98)		(+ 5.56)

From the table above, it is clear that the quantity of foreign coal has decreased by 180 times and furnace oil by 5.5 times during the last 35 years. The quantity of H.S.D. oil has increased by 6.7 times.

There was a sharp fall in the quantity of coal consumed by Pakistan Railways during 1955-88, it dropped from 204,606 tonnes to 1134 tonnes because of conversion of steam engine to Diesel-electric locomotives. Furnace oil consumption increased slightly during 1955-70 and then dropped 1970-88. The H.S.D. oil increased sharply during 1955-70 and had a steady growth rate during 1970-88. The overall decline rate in quantities was 16% for Coal, 4.98% for Furnace oil while there was increase by 5.56%

per annum for H.S.D. Oil during the last 35 years. Maximum increase in fuel prices was observed during 1970-80. This may be due to devaluation of Pakistan Rupee and international oil price hike during the period. This has resulted in increase in expenditure of Pakistan Railways.

PRICE OF FUELS

( In Rs. )

Year	Coal		Fuel/Furnace Oil		H.S.D. Oil	
	Price	ACGR (%)	Price	ACGR (%)	Price	ACGR (%)
1	2	3	4	5	6	7
1955-56	38.13	(+ 7.8)	91.4	(+ 3.7)	244.21	(+ 5.4)
1970-71	118.20	(+28.5)	157.80	(+22.4)	535.80	(+20.5)
1980-81	1448.66	(+11.0)	1193.6	(+ 8.2)	3452.93	(+ 5.2)
1990-91	4106.20		2625.19		5738.67	
Overall		14.30		10.06		9.44

It can be seen that prices of coal per tonne have increased 107.7 times during the last 35 years, furnace oil by 28.7 times and H.S.D Oil 23.5 times. The overall growth rate for prices of coal per tonne during the last 35 years was 14.3%, furnace oil 10.1% and H.S.D. oil 9.4% per annum. The price of coal per tonne increased at the rate of 7.8% per annum during 1955-70, 28.5% during 1970-80, 9.7% during 1980-88. Similarly the prices of furnace oil per tonne increased at the rate of 3.7%



during 1955-70, 22.4% during 1970-80 and 6.2% during 1980-88. The price of H.S.D. oil per tonne increased @ 5.4% per annum during 1955-70, 20.5% during 1970-80 and 3.3% during 1980-88.

Financial Position:

Pakistan Railway provides a basic public utility service in the form of low cost mode of transport to masses at large and it operates as long distance bulk carrier of freight, mostly on Government account. Moreover its rates and fares structure is not allowed to match the cost of its operations as a measure of Government policies. As such it is faced with a difficult situation because it is operating as a utility service but its financial results are being expected as of a purely commercial organization guided by profit motives.

The Railways were earning profits upto 1972-73 after accounting for depreciation and interest. Since then, their costs have increased at the rate 13.1% per annum and revenues at the rate of 11.1% per annum. Their operating ratio has decreased from 68% in 1972-73 to 92.6% in 1989-90. After taking into account depreciation and interest, annual losses have increased from Rs.24 million in 1972-73 to Rs.1096 million in 1982-83 Rs.2,767 million in 1988-89 and Rs.2172 million in 1989-90. On the whole, the Railways are in a vicious circle of dilapidated equipment, poor performance, less earnings, less funds for improvements and so on.

Table-13: OPERATING REVENUE

(Figures in (000) Rs.)

YEAR	Passenger Earnings		Luggage, Parcels and Mails etc. Earnings		Freight Earnings		Miscellaneous Earnings		Total	
	Rs. (000)	%	Rs. (000)	%	Rs. (000)	%	Rs. (000)	%	Rs. (000)	%
	1	2	3	4	5	6	7	8	9	10
1948-49	102,778	41.9	27,106	11.0	109,010	44.5	6,185	2.6	245,079	100.0
1955-56	136,434	37.7	23,336	6.4	197,096	54.5	4,897	1.4	361,763	100.0
1960-61	187,488	38.7	32,730	6.8	256,464	53.0	7,544	1.6	484,226	100.0
1965-66	211,981	35.8	54,579	9.2	314,747	53.2	10,796	1.9	592,103	100.0
1970-71	264,714	37.0	35,477	4.9	400,144	55.9	15,937	2.2	716,272	100.0
1975-76	457,221	28.0	69,842	4.3	1,074,306	65.8	31,469	1.9	1,632,838	100.0
1980-81	1,090,641	37.1	104,086	3.5	1,712,582	58.2	35,135	1.2	2,942,444	100.0
1985-86	1,561,631	35.8	211,621	4.9	2,494,197	57.1	100,252	2.3	4,367,702	100.0
1990-91	3,353,775	49.0	298,049	4.3	3,048,564	44.5	146,899	2.2	6,847,287	100.0

(ACGR %)

1948-55	4.13	- 2.16	8.83	3.39	5.72
1955-60	6.56	7.00	5.41	9.03	6.00
1960-65	2.49	10.77	4.18	7.43	4.10
1965-70	4.54	- 9.00	4.92	8.10	3.88
1970-75	11.55	14.51	21.84	14.58	17.92
1975-80	18.99	8.31	9.77	2.23	12.50
1980-85	7.44	15.25	7.81	23.87	8.22
1985-90	16.52	7.09	4.09	7.94	9.41
OVERALL	8.65	5.87	8.25	7.83	8.25

Table-13, reveals that during the financial year 1948-49, the total earnings of Pakistan Railways amounted to Rs.245,079 thousands consisting of 102,778 thousand (41.9%) from passengers Rs.27,106 thousand (11.0%) from luggage, parcels, mails etc. Rs.109,010 thousand (44.5%) from fareight and Rs.6,185 thousand (2.6%) from telegraph and other miscellaneous sources. Similarly during 1990-91, the total earnings of Pakistan Railways amounted to Rs. 6,849,287 thousand consisting of Rs.3,353,775 thousand (48.98%) from passengers, Rs. 298,049 thousand (4.35%)from luggage, parcels, mails etc. Rs.3,048,564 thousand (44.52%)from freight and Rs.146,899 thousand (2.15%) from telegraphs and other miscellaneous sources.

It is seen that the share of earnings from passengers has nominal increase from 41.9% in 1948-49 to 48.98% in 1990-91 while luggage, parcels, mails etc. decreased from 11.0% to 4.35% and other miscellaneous sources\*from 2.6% to 2.15% which shows that the share of earnings from freight remained constant i.e. 44.5%. The overall growth rate in earnings was 8.3% per annum during last 42 years. 8.65% from passenger, 5.87% from luggage, parcels and mails. etc, 8.25% from freight and 7.83% from

Miscellaneous. The maximum growth rate is seen in earnings from passengers during 1975-80 and minimum during 1948-50. This may be due to increase in prices and enhanced fare rates. In case of earnings from freight the maximum increase was observed during 1970-75 and minimum during 1948-50 and 1985-88.

Table-14: OPERATING EXPENSES

YEAR	REPAIRS AND MAINTENANCE		OPERATION FUEL		OPERATION STAFF		OPERATION OTHER THAN STAFF & FUEL		ADMINISTRATION		MISCELLANEOUS RS. (000)		TOTAL (000)	
	Rupees	Percentage	Rupees	Percentage	Rupees	Percentage	Rupees	Percentage	Rupees	Percentage	Rupees	Percentage	Rupees	Percentage
1948-49	38,970	22.7	51,807	30.2	24,839	14.5	5,696	3.3	17,546	10.3	32,503	19.0	171,361	100.0
1955-56	71,090	29.8	54,141	22.7	36,309	15.2	9,096	3.8	31,280	13.1	35,714	15.4	238,630	100.0
1960-61	110,762	37.2	68,517	23.0	49,946	16.8	13,257	4.4	41,723	14.0	22,415	4.5	297,845	100.0
1965-66	148,341	35.4	104,182	24.9	68,297	16.3	14,102	3.6	61,472	14.7	22,415	5.3	418,809	100.0
1970-71	189,225	35.6	137,795	25.9	87,020	16.3	19,910	3.7	79,725	15.0	18,591	3.5	532,264	100.0
1975-76	505,764	39.4	348,828	27.2	195,046	15.2	58,202	4.6	163,303	12.7	11,321	0.9	1,282,464	100.0
1980-81	955,032	38.3	816,673	32.8	280,481	11.3	109,998	4.4	312,615	12.6	15,992	0.6	2,490,791	100.0
1985-86	1,675,175	41.9	1,106,583	27.7	503,436	12.6	185,953	4.6	517,606	12.9	12,767	0.3	4,001,520	100.0
1990-91	2,601,276	44.0	1,185,351	20.3	799,332	13.7	389,057	7.0	704,971	1.0	35,175	1.0	5,828,671	100.0
OVERALL (ACGR %)	10.5	7.7	8.6	10.5	9.6	0.2	8.8							

1948-55	8.97	6.31	5.57	5.92	8.61	1.76	4.84
1955-60	9.27	4.82	6.59	7.82	5.93	-21.90	4.53
1960-65	6.02	8.74	6.46	1.24	8.06	10.44	7.05
1965-73	4.99	5.75	4.96	7.14	5.34	-3.81	4.91
1970-75	21.73	20.41	17.52	23.93	15.42	-10.43	19.23
1975-80	13.36	18.55	7.54	13.58	13.87	7.15	14.20
1980-85	11.89	6.26	12.41	11.07	10.61	-4.61	9.95
1985-90	9.20	13.85	9.68	15.91	9.60	22.47	7.81
OVERALL	10.52	7.74	8.62	10.98	9.58	0.19	8.76

Note: Operating Expenses do not including (i) Appropriation to depreciation Reserve Fund; (ii) State Railway interest on debt; (iii) Appropriation to Improvement Fund; and (iv) Miscellaneous Railway expenditure.

(ACGR %)

Table-14, shows that during the year 1948-49, the total ordinary working expenses of the Pakistan Railway amounted to Rs.171,361 thousand consisting of Rs.38,970 thousand (22.7%) on repairs and maintenance of track, buildings, rolling stock etc. Rs.51,807 thousand (30.2%) on operation fuel, Rs.24,839 thousand (14.6%) on operation staff, Rs.5696 thousand (3.3%) on operation other than staff and fuel, Rs.17,546 thousand (10.2%) on administration and Rs.32,503 thousand (19.0%) on miscellaneous expenses.

Similarly during the year 1990-91, the total ordinary working expenses of the Pakistan Railway amounted to Rs.5,828,671 thousand consisting of Rs.2,601,276 (44.63%) on repairs and maintenance of track, building, rolling stock etc, Rs.1,185,351 thousand (20.34%) on operation fuel, Rs. 799,332 thousand (13.70%) on operating staff, Rs.389,057 thousand (6.68%) on operation other than staff and fuel, Rs. 818,480 thousand (14.04%) on administration and Rs.35,175 thousand (0.61%) on miscellaneous expenses.

It is observed that the share of expenses on repairs, maintenance of track, building and rolling stock has increased from (22.7%) to (44.63%) during the last 42 years. The expenditure on administration has increased from (10.3%) to (14.04%). The share for other items has decreased. The growth

rate has been observed in all cases except miscellaneous expenses. The overall growth rate in expenses was 8.8% per annum during the last 42 years, 10.5% on repair and maintenance, 7.7% operation fuel, 8.7% operation staff, 10.6% operation other than staff and fuel, 9.6% administration and 0.19% miscellaneous.

#### INVESTMENT IN RAILWAYS

Transport sector has accounted for 14 to 23 percent of public sector development expenditure during successive plan periods. Within transport sector, share of railways has declined from 51.5 percent in the first plan to less than 11 percent in the Seventh Plan. The share of roads increased from 23 percent in the first plan to 45.7 percent in the non-plan period and has decreased to 35 percent in the Seventh Plan. The allocations for ports and shipping were significant in the fourth and fifth plan due to construction of Qasim Port. The share of civil aviation has increased from 9.7 percent in the first plan to 22.7 percent in the sixth plan and stands at 1.9 percent in the 7th plan due to transfer of the activities to semi public sector. The absolute share of civil aviation in the fourth, fifth and sixth plan was more than Railways who carry many times more traffic. Details are shown in the table below.





Table-16: NUMBER OF PERSONS EMPLOYED BY PAKISTAN RAILWAYS

YEAR	Civil Engineering Department	Mechanical Engineering Department	Transportation Department	Commercial Stores Department	Medical Department	Electrical Department	Railway Police	Accounts Department	Headquarters Office	All Other Departments	Total No. of Employees	Total Cost of Employees (In Thousands)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1948-49	29,125	31,264	11,931	5,965	3,824	2,103	3,480	2,190	2,238	391	1,568	94,079	82,269
1955-56	31,922	31,290	12,810	8,284	4,664	1,932	3,970	3,775	2,119	605	2,816	104,187	122,107
1960-61	33,888	41,838	12,418	8,904	6,428	3,026	4,724	4,296	2,541	630	3,098	121,729	157,684
1965-66	32,872	43,271	14,835	9,700	7,113	3,241	9,387	4,802	2,970	903	3,147	132,241	212,340
1970-71	32,837	47,705	17,210	9,903	5,505	3,540	8,015	4,614	2,958	973	1,176	134,436	269,558
1975-76	34,355	46,980	18,265	10,300	6,050	3,708	7,710	4,958	3,109	1,031	1,002	137,468	525,755
1980-81	29,775	43,372	18,473	9,331	5,211	3,770	7,413	7,856	2,619	1,246	1,231	130,297	707,579
1985-86	31,954	40,572	18,394	9,516	4,235	3,426	7,666	7,234	2,772	1,106	1,172	128,047	1,409,264
1990-91	33,455	41,757	17,672	8,634	4,920	3,861	7,538	7,605	2,550	1,127	1,765	130,884	2,525,153
OVERALL													
(ACGR %)	0.33	0.69	0.94	0.88	0.60	1.46	1.86	3.00	0.31	2.55	0.28	0.79	8.49

Table-16, shows that during the year 1948-49, the Pakistan Railways had 94,079 persons on its pay rolls, chargeable to revenue account. Out of this number 29,125 (30.96%) were employed in the civil engineering department, which maintains track and buildings, 31,264 (33.23%) in the mechanical department which repairs and maintains the rolling stock, 11,931 (12.68%) in the transportation department, which controls guards, station masters, yard staff etc. 5,965 (6.34%) in the commercial department which controls the passenger ticket offices, freight depots, luggage and parcel offices etc. 3,824 (4.06%) in stores department, 2103 (2.23%) in medical department, 3,480 (3.70%) in electrical department, 2190 (2.33%) in the Railway Police Department, 2238 (2.38%) in the Accounts Department, 391 (0.42%) in the Headquarters Office and 1568 (1.67%) in all other departments including appropriation to depreciations reserve fund but excluding interest on assets. The total cost of all these employees was Rs.82,269 thousand.

During 1990-91, the Pakistan Railways had 130,884 persons on its pay rolls, chargeable to revenue account. Out of this number 33,455 (25.6%) were employed in the Civil Engineering Department, 41,757 (31.9%) in the Mechanical Department, 17,672 (13.5%) in transportation department, 8,634 (6.60%) in the commercial department, 4,920 (3.76%) in store department, 3,861 (2.95%) in Medical Department, 7,538 (5.76%) in Electrical

Department, 7,605 (5.81%) in the Railway Police Department, 2,550 (1.95%) in the Accounts Department, 1,127 (0.86%) in the Headquarters Office and 1,765 (1.35%) in all other departments. The total cost of all these employees was Rs. 2,525,153 thousands representing 36.58% of the total working expenses (including appropriation to depreciation reserve fund but excluding interest on assets).

The share in number of employees in civil engineering, mechanical engineering, store and account departments has decreased while it has increased in all other departments. The overall growth in number of employees was 0.8% per annum during 1948-90 while corresponding expenditure incurred has increased @ 8.50 per annum. The maximum growth in number of employees was observed during 1970-80 while the total cost of employees was highest during 1980-90. This may be due to price escalation of fuel and other material consumed alongwith wage increases during the period.

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CHAPTER - IV

CONCLUSIONS AND RECOMMENDATIONS

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CHAPTER - IV

CONCLUSIONS AND RECOMMENDATIONS

Pakistan Railways form the life line of the country catering to all its needs for large scale movement of freight as well as passenger traffic there-by contributing to economic growth and promoting national integration.

Pakistan Railways has been showing a surplus in its financial results till F.Y-1971-72. This position changed there after. A number of factors responsible for this include devaluation of Pakistan currency, international oil prices hike, introduction of new scales of pay, interim relief and other Federal Government Policy measures having a bearing on the expenditure of railways. It all compounded to a considerable financial burden. Railway requires sizeable import of spares and stores for its operation every year. Railway also supports very large manpower with fat wage bill. Rate of increase in fares and freight rates and resultant revenues did not keep pace with increase in expenditure. Between 1971-72 and 1988-89 while the expenditure went up 10.6 times, the revenue receipts improved 7 times only. The railway as such had to live on Federal Government subsidy which is tantamount to taxing the non-users.

The increasing number of overage assets out paced the rehabilitation efforts causing the railway performance to stagnate. As a result of this, Railways has been obliged to operate with less than desired standards of punctuality and customer service. Railway has also been obliged to incur heavy expenditure on the maintenance and up keep of its extensive infrastructure and installation. By far the most important factor which adversely affected the railways has been the unbearable strain of inflation both within and outside the country.

In this case, the study is based on the data available in the Year-Books of Pakistan railways. The data available in the year books of Pakistan Railways has been examined/scrutinized and analysis of data arranged in the same order. Based on the analysis some conclusions emerged which can be seen as under :-

CONCLUDING REMARKS:

1. At the time of independence, Pakistan Railways had a route length of 8,525 kilometres. Since then it had been able to add about 250 kilometres of route length to the system.
2. During 1948-49, the total number of locomotives was 821. Out of which 807 were steam and 14 diesel-



electric locomotives. This number decreased to 753 in 1990-91, out of which 160 were steam locomotives, 564 diesel-electric and 29 electric. Of 160 steam locomotives all were overage and due replacement. Of 564 diesel electric 31% were overage. It means that there is a larger number of in-effective locomotives with their doubtful reliability, reduced haulage capacity and increase in the cost of their operation and maintenance. It is observed that steam motives are gradually being phased out of service giving place to more powerful diesel locomotive.

3. During 1948-49, Pakistan Railways owned 2,533 coaching vehicles which increased to 3306 in 1970-71 @ 1.22% per annum. Since then it decreased to 2746 in 1990-91, out of which 2339 are passenger coaches and of which 1761 are committed as daily requirements. Average economic life of a coach is 35 years. About 900 coaches are more than 20 years old for which increasing sums are required for maintenance.
4. During 1948-49, Pakistan Railways owned 23,815 freight wagons which increased, to 37,337 in 1970-71, @ 2.06% per annum. Since then it gradually declined to 34851 in 1990-91. The overall growth rate was 0.9% per annum

during the last 42 years. Out of total freight wagons 92% are 4-wheelers having axles fitted with conventional brass bearings susceptible to hot boxes at sustained speed for long runs. Nearly 1600 of these, constituting 4.4%, are overage.

5. During 1948-49, the number of passengers carried was 72 million covering 6.466 billion pass-km. The pattern of passenger traffic on the Railways has been that the number of passengers increased till 1977-78 when all time high figure of 149 million was attained which then showed gradual decline and in 1990-91 it was 84 million. However, the passenger kilometres continued to grow to 19.964 billion in 1990-91. The average distance travelled by a passenger which was 86 kilometres in 50's went-up to 235 kilometres in 1990-91. This gives clear indication that railway has retained long lead traffic while road has taken away short lead traffic which previously was moved by rail. The overall growth rate for passenger carried was 0.4% during last 42 years, passenger kilometres 2.72%, distance travelled per passenger 2.3% and average revenue per passenger 7.0%.

6. During 1948-49, the tonnes of freight carried was 6.356 million which increased to 7.717 million in 1990-91. The tonne kilometres increased from 2.740 billion to 5.709 billion during the same period. The tonnes of freight carried was maximum (15.5 million) during 1965-66. The best performance indicator was (9.4 billion) achieved during 1978-79. The tonnes of freight carried increased at an annual growth rate of 0.9%, tonne-kilometres 2.4%, average kilometres travelled by a tonne 1.5%, average rate charged per tonne per kilometre 4.5% and average revenue per tonne 6.8% during last 42 years.
7. The percentage share of total number of freight wagons carried loaded/empty per train was 70.30 during 1948-49. It was 65.35 during 1970-71 which changed to 53.47 in 1990-91. It shows that share of empty wagons per train has increased from 30% to 47% during the last 42 years.
8. The average turn round of wagon (days) has increased from 12.1 in 1970-71 to 18.6 in 1990-91 @ 2.2% per annum which shows operational inefficiency of Pakistan Railways.

9. The quantity of foreign coal consumed decreased at the rate of 16.5% per annum during the last 42 years. The furnace oil decreased @ 0.95% while HSD Oil increased @ 7.88%.
10. The overall growth rate in price of coal per tonne consumed by Pakistan Railway was 14.30% per annum during the last 35 years. Furnace Oil 10.1% and H.S.D. oil 9.44%.
11. The share of earnings from passenger traffic increased from 41.9% to 48.98% during 1948-90 while luggage, parcel, mails etc decreased from 11% to 4.35% and miscellaneous from 2.6% to 2.15% whereas earnings from freight remained almost constant. The overall growth rate for earnings was 8.3% per annum during the last 42 years. Passengers 8.6%, luggage, parcel 5.9%, freight 8.3% and miscellaneous 7.8%.
12. The share of total ordinary working expenses of the Pakistan Railways increased from 22.7% to 44.63% on repair and maintenance of track, buildings, rolling stock etc during the last 42 years. Operation other than staff from 3.3% to 6.68% and administration from 10.3% to 14.04% but it decreased from 30.2% to 20.34%.

on operation fuel, 14.5% to 13.7% on operation staff and 19.0% to 0.6% on miscellaneous charges. The overall growth rate for operating expenses was 8.8% per annum during the last 42 years.

13. During 1948-49, Pakistan Railways had 94,079 persons on its pay rolls, chargeable to revenue account which increased to 134,436 in 1970-71 @ 1.64% per annum. After this, it declined gradually to 130,884 in 1990-91 @ 0.13% per annum. The overall growth rate for employee in Railway was 0.79% and their expenses 8.54% per annum during the last 42 years.
14. During 1948-49, the percentage of Expenditure to Gross Earnings were 69.9% which increased from 74.3% in 1970-71 to 85.1% in 1990-91.

RECOMMENDATIONS:

1. Fare and Rate structure should be at a level which the market can sustain. The present rates were fixed in 1985. Since then, the operating costs have risen by more than 40%. This gap should be gradually reduced by way of an annual upward adjustment of rate and fare.

2. Adequate investment out-lay should be made to cover at least the bare minimum requirements of core investment and maintenance programme.
3. Establishment of Railway Property Board is needed which will facilitate face up-lift of important Railway Stations and help in disciplining the mushroom growth of retailers out-side the stations and on platforms.
4. Railway should be declared as an industry making profits and also exporting industrial equipment and technology.
5. Marketing has to be accorded the status of a prime management function.
6. All public dealing departments should work under one umbrella and all other departments working like service departments.