

CHAPTER-3

PRICING STRATEGY OF INDIAN RAILWAY

3.1. HISTORICAL PERSPECTIVE ON THE EVOLUTION OF RAIL PRICING

The Railway system in India began with the incorporation of 3 companies namely; Great Indian Peninsular Railway (GIP), East Indian Railway (EIR) and the Madras Railway in England. The first Goods classification used over GIP and EIR was simple and succinct in that it consisted of only 5 classes and the Madras Railway had only 3 classes. In all the Railways the rates were quoted in Ton per mile.

With increase in demand for traffic and limited capacity, the Railways started to increase its rates. The Government Director for Railways in his report for 1861-62 commented that the government should control the maxima rates, leaving the actual fixation of rates to the companies. Pursuant to the Secretary of State despatch no. 48 dated 25.6.1868 the government fixed the maxima rates for 5 classes of traffic in addition to rates for foodgrains and coal which were not included in any of the classes. No instructions were issued regarding the articles to be put in each class and no restriction was placed for shifting of articles from one class to

another (the Government thus gave considerable flexibility to the company Railways in the matters pertaining to rate fixation and goods classification).

In 1880, Railway Conference was formed which later evolved into Indian Railway Conference Association in October, 1903. The Association is still active and plays important role in freight fixation.

It was in 1887 that perhaps for the first time specific principles were enunciated to regulate fixation of rates. It was in the same year that maxima-minima of rates were notified. Surprisingly except for 1st and special class there was no difference between the maxima and minima for all other classes (Government thus with a sleight of hand controlled the rates though on paper maxima and minima was available). Understandably and perhaps justifiably the company Railways objected as this did not give any leeway to them for fixing the rates. Hence revised rates were issued in 1891 with a spread available for maxima and minima rates.

The first legal provision effecting rating was the promulgation of the Indian Railway Act 1890 and the Railway Administration were obliged to treat all Railway users at the same footing and

provisions were made regarding undue preference, discrimination and unreasonable rates.

In 1901, the Secretary of State for India appointed Mr. Thomas Robertson as special Railway Commissioner to look into a wide gamut of issues pertaining to Railways. He compared the cost of construction of Railways in England and India and opined that rates in India should be $\frac{1}{6}$ th of the rates in England, there should be telescopic rates so that there is sufficient reduction in rates for long distances and that there should be one classification of Goods applicable for the whole of India.

Mr. Neville Priestley observed that where American Railways made income by charging smaller profit per unit but carried large volumes, in India the income was by larger profit per unit and small volume. The committee under Mr. James Mackey appointed in 1907 to look into various issues of railways did not deal with freight rates.

Seminal effort for simplification, generalization and providing uniformity regarding Code of rules for acceptance, carriage and delivery of goods etc. all over Railways was made by the Tariff Simplification Committee constituted in 1905 by IRCA. The committee's report was notified in July, 1910 with the sanction of

Railway Board and any changes in classification could be done only with the approval of Railway Board.

Indian Railways Committee appointed in 1922 under the chairmanship of Sir William Ackworth is perhaps the most well known committee which gave far reaching recommendations the acceptance of which changed the Railways from companies to State, reorganized the Railways, setting up of Railway Rates Tribunal etc. The committee segregated the Railway budget from the General budget a feature which still exists. The committee observed that the rates in India were among the lowest in the world and that rates had not increased for a long time and revision was long overdue. Pursuant to the last recommendation, a revised classification was issued consisting of 10 classes and the maxima were increased by 15% to 25% and the minima were left undisturbed, thereby helping generation of greater revenue.

Dr. John Mathai, chairman of the Indian Tariff Board, 1929 observed that the wide difference between the maxima and minima was very high and that there is a need for telescopic rates and simplification of the rating structure. Some industries like coal, sugar, cement, iron and steel were quoted station to station rates.

The Royal commission on Agriculture, 1928 also commented on the Railway rates and as expected from a user group advised the charging of as less rates as possible and that the rates should be periodically revised to effect adjustment.

The depression in 1930s led to the overall decline of the economy resulting in decreased demand for transport. The high rates of Railway tariff was a cause of numerous complaints from various users. In order to rectify the anomalies in the freight structure of 1922 and to address the complaints a review was conducted. This resulted in the declaration of new freight structure w.e.f 1.5.1936. Number of classes increased from 10 to 16 and the gap between Railway and owner's risk was reduced.

In the wake of budgetary deficit faced by the Railways a major review was undertaken by Indian Railways Enquiry Committee under the chairmanship of Sir Ralph Wedgewood in 1936. The committee examined the organizational structure, functions of each department, classification, risk rates etc. and gave wide ranging recommendations.

After independence a number of High Powered Expert Committees as mentioned below were appointed by the Central Government

from time to time to review and recommend improvements in Tariff policy;

- Railway Freight Structure Enquiry Committee, 1957.
- Rail Tariff Enquiry Committee, 1980.
- Railway Reforms Committee, 1983
- Railway Fare and Freight Committee, 1993

Thus one can see that the review of Railway rates has been a constant feature of the various committees. Prior to independence the committees were formed at fairly regular intervals and gave important recommendations.. After independence only three committees have been formed and the last one was instituted nearly 20 years ago. With far reaching changes having taken place in the Indian Economic scene in general and transport sector in particular perhaps there is a need for a fresh look at all the issues and time is ripe for the setting up of a specialized committee to look into the tariff issues of Indian Railways.

3.2. RECENT RATIONALISATION OF FARE STRUCTURE

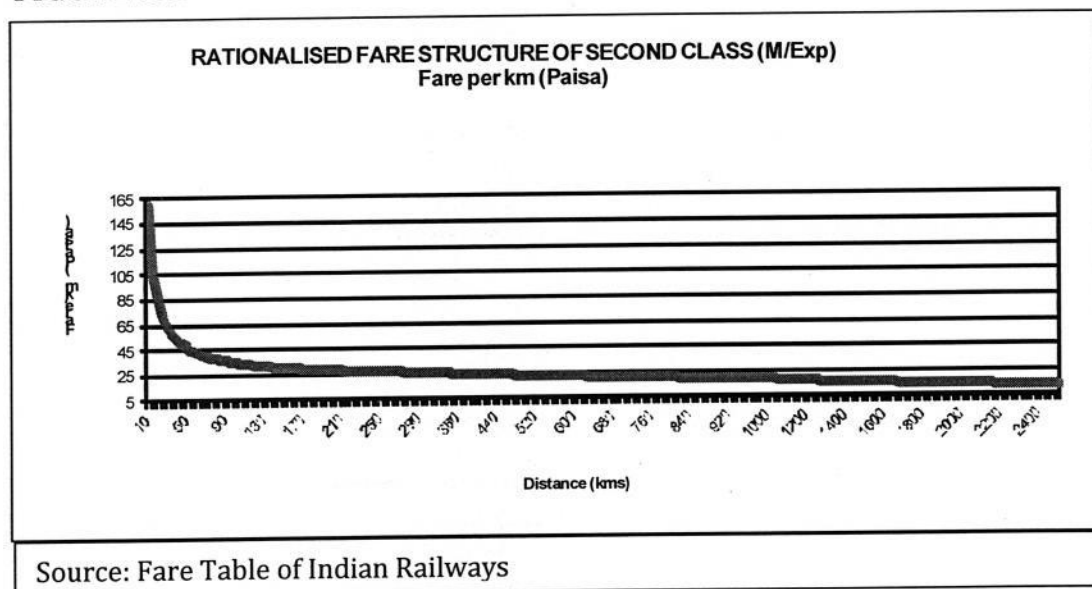
Over the years, certain distortions and anomalies had gradually crept in the fare and freight structures due to ad-hoc increases in the passenger fares and freight rates. A need for rationalisation was being felt for quite sometime. Accordingly, rationalisation of

the fare and freight structures was initiated in the Railway Budget 2002-03 which is being continued. The salient features of the rationalisation of the Fare & Freight Structures are given in the paragraphs that follow.

3.2.1. BASE CLASS

The fares are based on the telescopic principle of rating, which implies that the fare per passenger per kilometer reduces with the increase in distance of travel. In the Railway Budget 2002-03, the

FIGURE 3.1



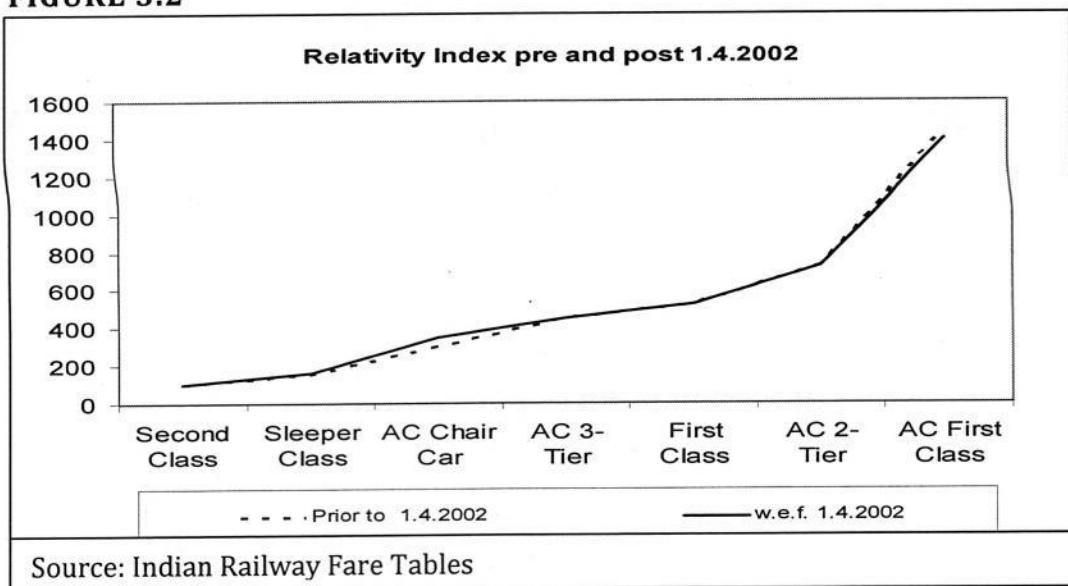
fare structure of Base Class i.e. Second Class (Mail/Express) was rationalised by modifying the taper in the fare structure to provide a smooth reduction in rate per kilometre with increase in the distance as graphically depicted in Figure 3-1. The fares for all other Classes of Mail/Express services were rationalised to provide a

fixed relationship with the fares for the Base Class. Indexing the fares of Second Class (Mail/Express) as 100, the relativity index of various classes was modified as mentioned in the table below.

3.2.2. SECOND CLASS (ORDINARY) FARES

Earlier there was no fixed relationship between the fares for Mail/Express trains and Ordinary Passenger trains. During the Railway Budget 2002-2003, the fare structure for Second Class (Ordinary) was also rationalised applying a uniform scale upto 100 kilometers. Keeping in view the need for providing a cheap mode of transport for the common man, the fares for Second Class (Ordinary) were fixed at 55% of rationalised fare structure of Second Class (Mail/Express) beyond the distance of 100 kilometers.

FIGURE 3.2



3.2.3. REDUCTION IN CROSS-SUBSIDISATION

As can be seen from Figure 3.2, with a view to reduce the level of cross-subsidisation, the fares for the sleeper Class were raised by around 3.2% through increase in the relativity index of its fares from 155 to 160 as mentioned in the preceding paragraph. The minimum fare for Second Class (Mail/Express) was also increased from Rs.15.00 to Rs.16.00 and that for the Second Class (Ordinary) increased from Rs.3.00 to Rs.4.00 in April 2002. Table 3.1 shows the relative fares pre and post 1.4.2002.

Table 3.1		
Relativity Index of Fares : Pre and Post 1.4.2002		
Class of Travel	Prior to 1.4.2002	w.e.f. 1.4.2002
Second Class	100	
Sleeper Class	155	100
AC Chair Car	300	160
AC 3-Tier	450	350
First Class	525	450
AC 2-Tier	720	525
AC First Class	1440	720

Source: Budget Documents of Indian Railways

3.2.4. MONTHLY SEASON TICKET FARES

Monthly Season Ticket (MST) fares were also rationalised in the Railway Budget 2002-03. The MST holders were earlier paying for 10 to 19 single journeys as against 50 single journeys normally undertaken in a month. The fares for the Second Class Monthly Season Tickets were fixed equivalent to fares for 15 single journeys by Second Class (Ordinary), uniformly for all distances of travel. This measure also marginally reduced the extent of cross-subsidisation, however, the suburban season tickets are still highly subsidised. As has been discussed later in section 3.4.5 the suburban fares are highly subsidised vis-à-vis non-suburban fares and there is a need to rationalize the same.

3.2.5. RAJDHANI AND SHATABDI EXPRESS FARES

Continuing the process of rationalization, the fares of Rajdhani and Shatabdi Express trains were also rationalised in the Railway Budget 2003-04. Though a separate fare structure for Rajdhani and Shatabdi Express trains was introduced in the year 1995-96, it did not have a fixed relationship with the fares of Mail/Express trains. The fares of Rajdhani and Shatabdi Express trains were linked to the rationalised fare structure of Mail/Express trains, fixing the basic fare for each class of Rajdhani and Shatabdi

catering service, as per the actual requirement of the journey are separately added to the basic fare. The rationalised fares of Rajdhani and Shatabdi Express trains have become generally lower since April 2003.

3.2.6. JAN SHATABDI EXPRESS FARES

Jan Shatabdi Express trains, with state-of-the-art coaches were introduced in the year 2002-03 to provide Shatabdi type services to the travelling public at large. The basic fares for Jan Shatabdi Express trains were initially fixed 10% higher than the fares of Superfast Mail/Express trains. Additional charges for catering services were included in the ticket fare. However, it was seen that these services were not being fully patronized.

To make Jan Shatabdi Express trains a more popular mode of comfortable inter-city travel, the mark-up over the fares of corresponding class of Superfast Mail/Express trains was reduced from 10% to 5% in the Railway Budget 2003-04. Further, the catering services were made optional on these trains to substantially reduce the ticket fare. Passengers on these trains can buy their refreshments on the train itself as per their requirement. The patronization of these trains has improved significantly since April 2003.

3.2.7. NON-PEAK PRICING

The concept of reduced fares during the non-peak periods was introduced for the first time on the Indian Railways. As an experimental measure, the basic fares of AC First Class and AC 2-Tier in all Rajdhani Express trains were reduced by 10% for the journeys performed during the period from 15th July to 15th September 2003. This measure had produced positive results with an increase in the occupancy, which was 32% higher in AC First Class and 26% higher in AC 2-Tier.

To sum up, rationalisation is a continuous process of refinement and it helps to adjust the tariffs with the changing situations. It is far too well known that the prospect and survival of any organization in modern times is dependent on its dynamic response to the changing ethos to which Indian Railways have been responding pro-actively. The focus areas of rationalisation have been simplification and transparency in tariffs and rules, making tariffs competitive and reduction in the level of cross-subsidisation.

3.3. RECENT RATIONALISATION OF FREIGHT STRUCTURE

The freight structure has undergone marginal changes in the past, however, major changes were initiated in 2002 and the same were continued till 2005.

The freight structure for Base Class-100 was also rationalised in April 2002 to provide a smooth reduction in rate per tonne per kilometer with increase in distance. The freight rates are telescopic in nature which means rate per tonne per kilometer will reduce with increase in distance

3.3.1. COMPACTION OF FREIGHT CLASSIFICATION (2002-2005)

The number of classes have been reduced from 59 to 19 during the period 2002-03 to 2005-06, as shown in Table 3.2.

All Classes have now been fixed in exact percentage relationship with the Base Class-100. For instance, the freight rates for Class-140 are exactly 1.4 time and that for Class-90 exactly 0.9 times of freight rates for the base Class-100. Three special classes introduced below Class-90 to implement the new concept of charging freight on the basis of full carrying capacity of wagon.

Table 3.2			
Rationalization of Commodity Classes			
	Total Number of Classes	Lowest Class	Highest Class
April, 2001	59	80-A (40%)	300X (320%)

April, 2002	32	90	300
April, 2003	27	90	250
April, 2005	19	90	240
Source: Budget Documents of Indian Railways			

The classification of certain high rated commodities like Petroleum products, Iron & Steel, Molasses, Pig Iron, Soda Ash, Cement, Manganese Ore, Clinker, Caustic soda etc. were reduced w.e.f. 01.04.2003 to make freight rates competitive. The extent of reduction in freight rates ranged from 3.7% for Cement to 10.7% for Petroleum products.

Table 3.3		
Freight Concession for Short Lead Traffic		
Distance Slab	Freight Concession	
	Prior to 1.4.2003	w.e.f. 1.4.2003
1 – 50 km	25%	50%
51 – 75 km	Nil	25%
76 – 90 km	Nil	10%
91 – 100 km	Nil	Nil
Source: Budget Document of 2003-04		

To attract very short lead traffic, charging of freight for all traffic booked up to 100 Kilometers was rationalised in April 2003 by giving concessions as shown in Table 3.3. Due to this the freight rates per tonne per kilometer for these distance slabs have become exactly the same. This rationalization has helped Indian Railways to attract some short distance traffic. However, not much traffic is available in short distance as transportation by trucks is not only economical but also convenient.

3.3.2. TO PAY SURCHARGE

The rail users have an option to pay freight charges either at the time of the booking or at the time of delivery. Earlier, in case freight is not paid at the time of booking, 'to-pay' surcharge @ 10% on normal freight was levied and collected at the destination at the time of delivery. In case of coal, the "to-pay" surcharge was 15% w.e.f. 15.1.1985. The rail users considered this surcharge very high when it was compared with any other system of borrowing or charging interest, particularly when the interest rates are being reduced under the current economic liberalisation process in the country. The 'to-pay' surcharge was therefore reduced from 10%

in the rationalised Goods Tariff. Some salient points of the rationalization of the Goods Tariff are summarized below:

- 1) The wagonload class in all cases is one stage higher than the notified trainload class. However, the wagonload class for the commodities listed under the highest Class-240 is Class-240.
- 2) Groups of commodities in their different physical forms or shapes and their different conditions, whether raw or manufactured, have a single uniform class under a main commodity head.
- 3) A commodity, which cannot be included in the 80 Main Commodity Heads given in the Goods Tariff, shall be charged at the highest Class-240.
- 4) All dangerous/ hazardous commodities, which are not given in the Goods Tariff, are to be charged at the highest Class-240.
- 5) No commodity is to be charged for a weight, which is less than the carrying capacity of the wagon.

- 6) The classification of Chemical Manures which were ranging from Class-90 for Urea to Class-115 for complex fertilizers, has been assigned a single uniform Class-100.
- 7) Entire group of Petroleum products, except Kerosene and LPG, have been assigned a single uniform Class-240.

3.4. ANALYSIS OF SOME REPRESENTATIVE DATA

In this section analysis of some freight and passenger data has been done to drive home some critical issues.

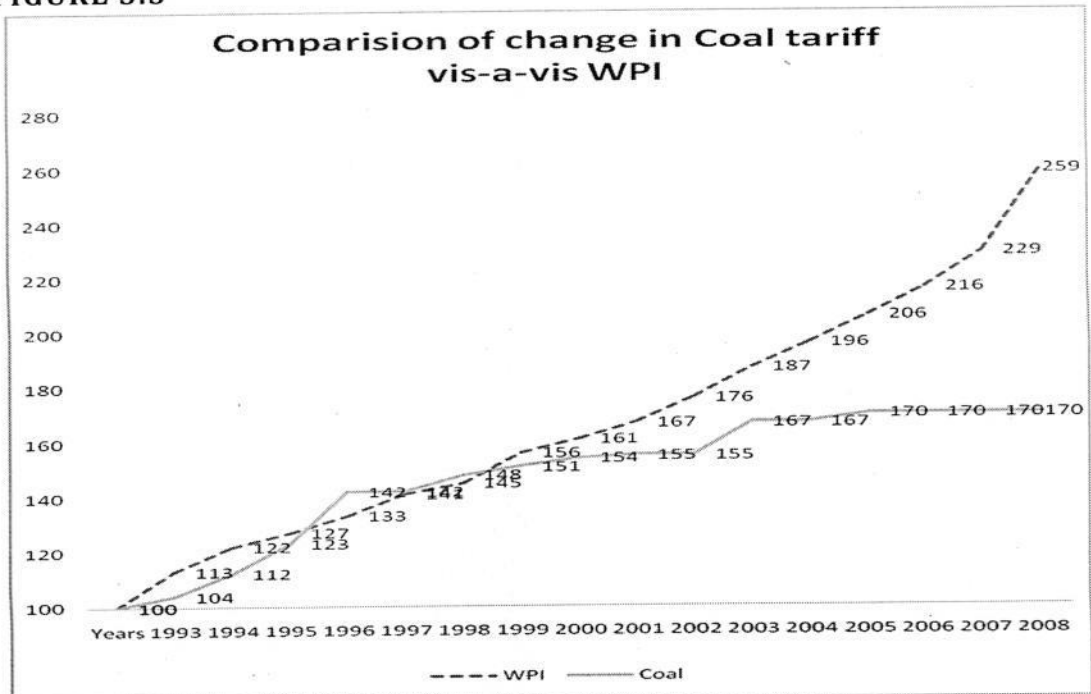
3.4.1. TARIFF CHANGE VIS-A-VIS SOME COMMODITIES

A reliable indicator of change in costs of different commodities in Indian context is WPI. Comparison of Railway freight with respect to the WPI would thus be a good indicator to understand the manner in which the tariffs have moved with changes in the WPI. As can be seen from the graphs plotted below (Figure 3.3 to 3.7) for some indicative commodities, the tariffs for different commodities have been constantly increased. The increase appears to be in tandem with the WPI till 2001-2002 and after that the increase in the freight rates is less than the increase in WPI show varied correlation with respect to the WPI. A correlation exercise has been done and the results of the correlation exercise

are shown in the Table 3.4. Foodgrain and fertilizer tariff show by far the best correlation whereas that of Iron and steel is the least. This is rather contradictory to the normally understood pricing wherein Fertilizer and Food grain tariff are kept at a lower level these being items of consumption in agriculture and mass consumption respectively.

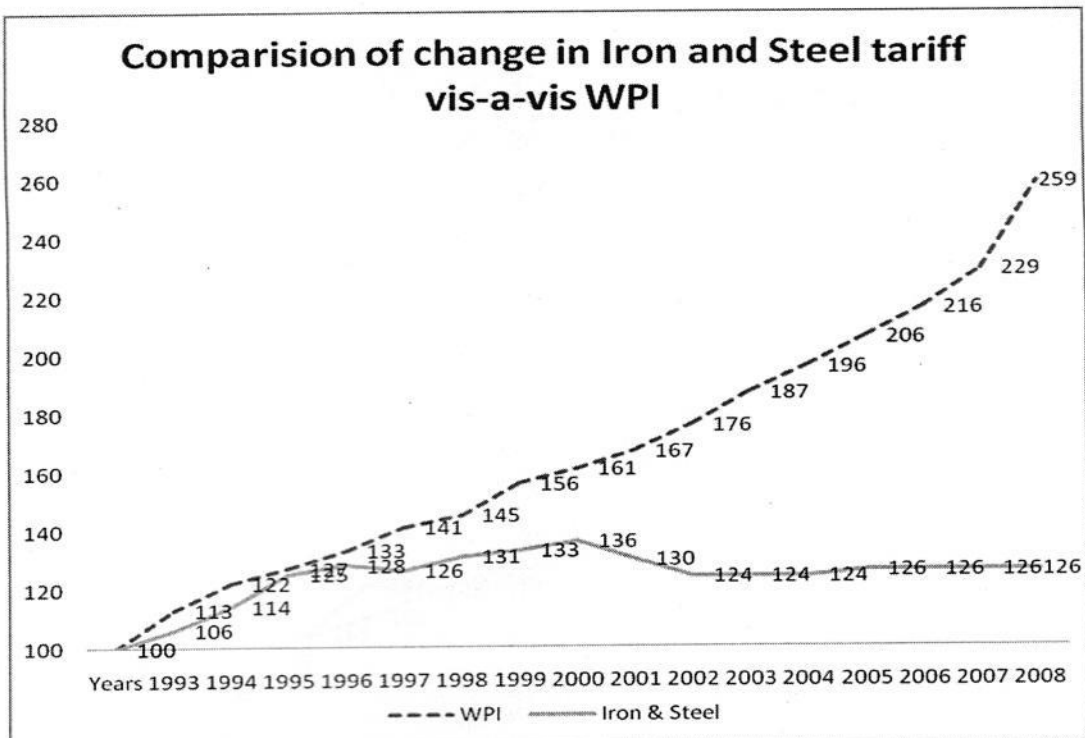
In order to ensure that the pricing correctly reflects the cost of the inputs it would be a good idea to link the freight rates to WPI. Whereas 100% neutralization may not be done as some increase costs should be absorbed by Railways by way of technological improvements.

FIGURE 3.3



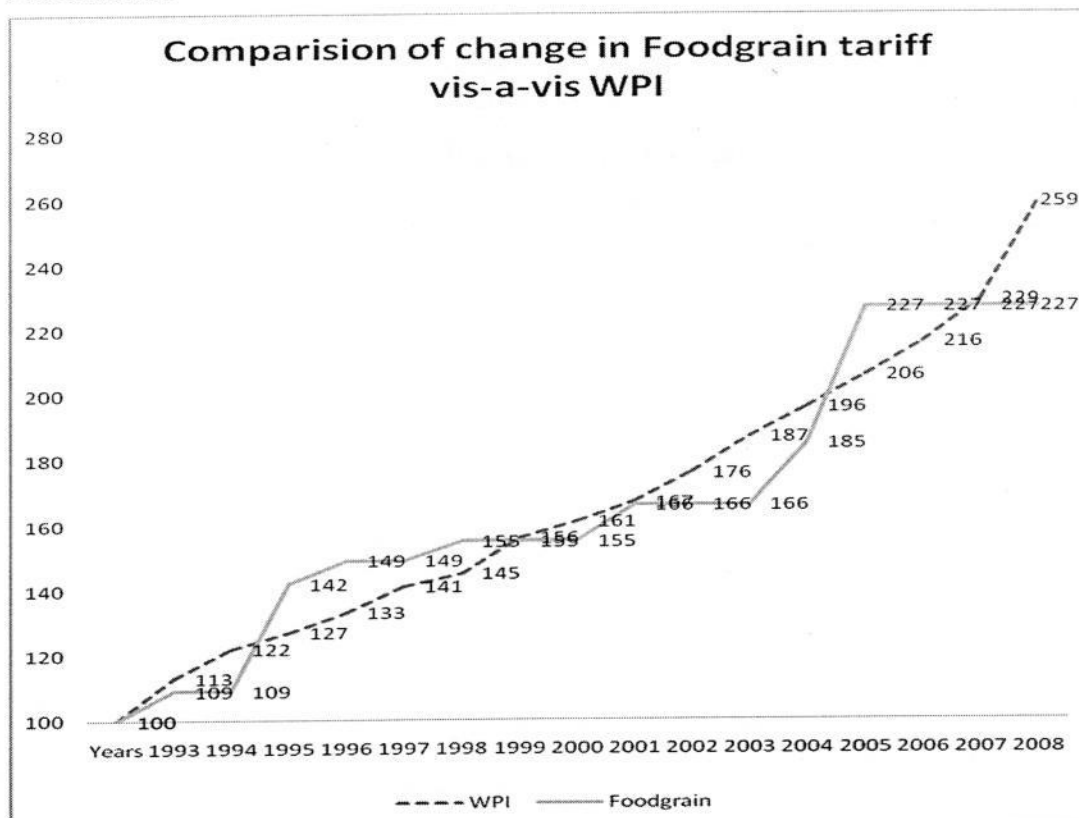
Source: Published WPI data and Freight table

FIGURE 3.4



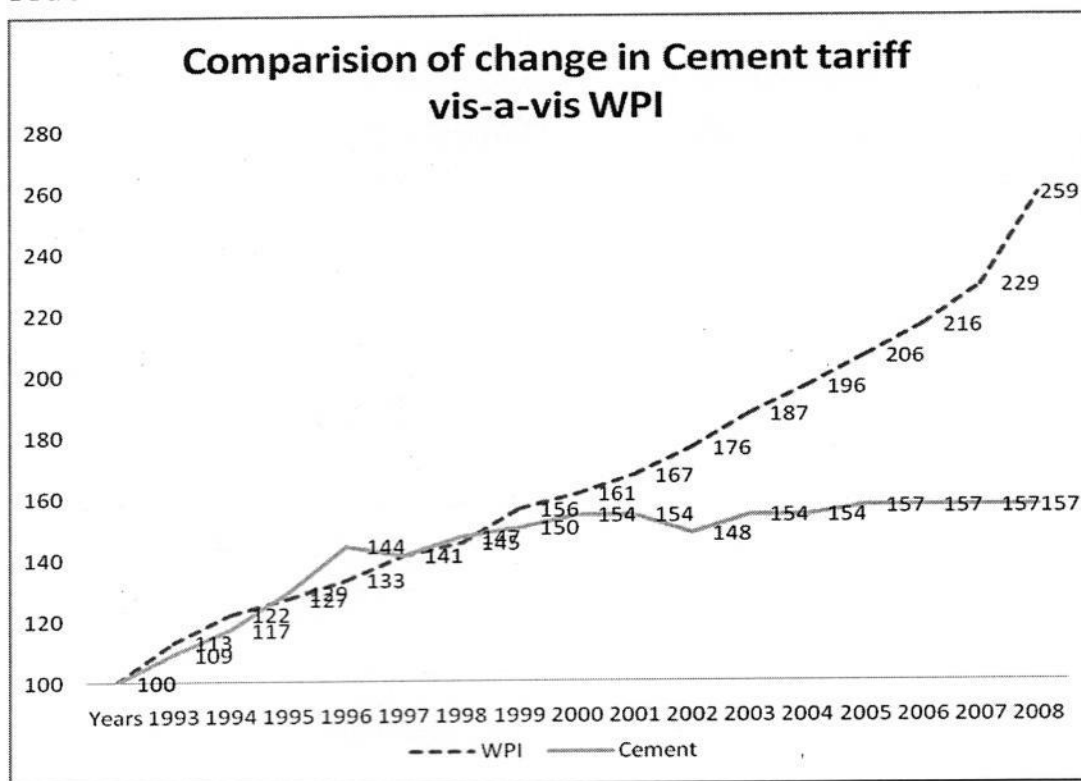
Source: Published WPI data and Freight table

FIGURE 3.5



Source: Published WPI data and Freight table

FIGURE 3.6



Source: Published WPI data and Freight table

FIGURE 3.7

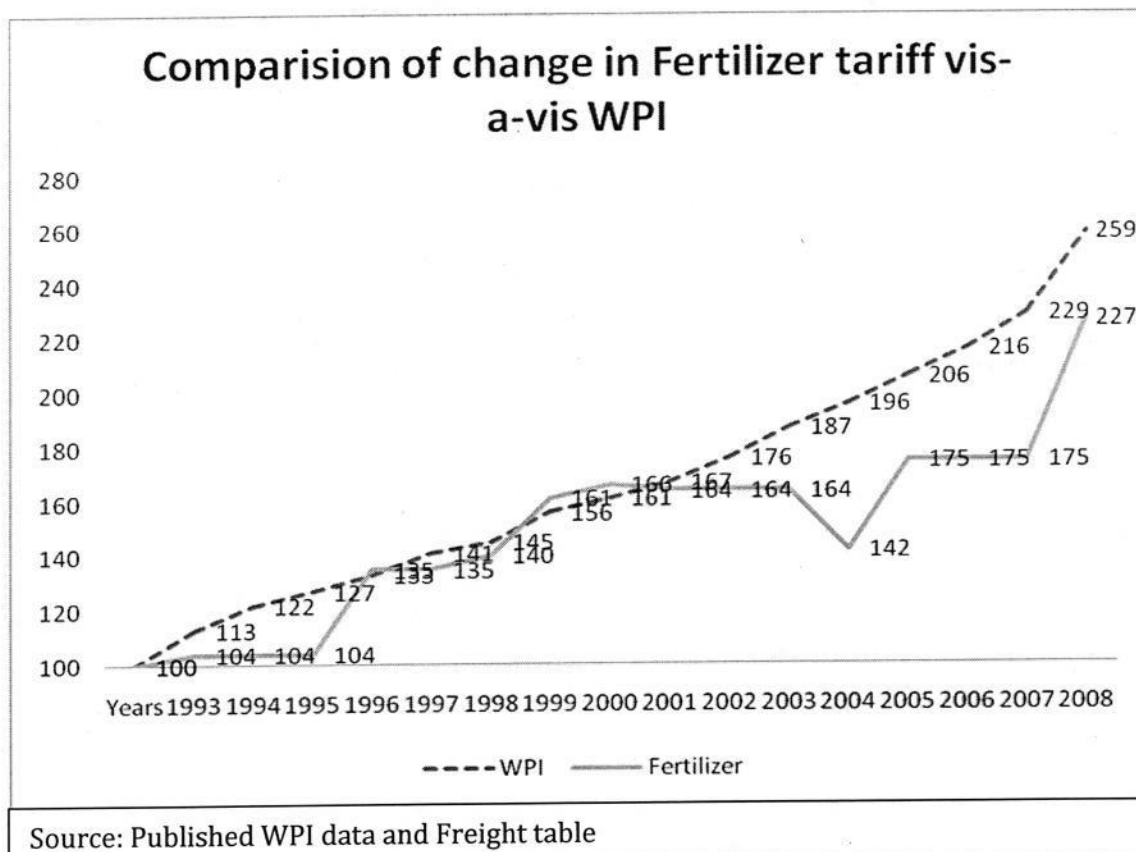


Table 3.4

Correlation of Tariff with WPI during the period 1993-2009

Commodity	Correlation
Foodgrain	0.949
Fertilizer	0.910
Coal	0.885
iron and steel	0.458
Cement	0.800

3.4.2. ANALYSIS OF TRUCK RATES FOR SOME O-D POINTS

An analysis of freight rates for trucks for some representative Origin-Destination (O-D) points has been done by culling out data from the internet. The freight data as on 31.1.2012 has been taken from <http://www.infobanc.com/logistics/logtruck.htm> and the distance between Origin and Destination cities has been taken from <http://www.incrediblerealindia.com/distance-calculator.shtml>. Thereafter rate per tonne per KM has been calculated. This ratio thus nullifies the distance factor and can be used for comparison purposes across various O-D's.

This data has then been sorted in increasing order of distance and a graph has been plotted to obtain a correlation between distance and freight per tonne.

From the graph it can be seen that with increase in distance there is a general increase in the freight rates. However there are some exceptions in OD, which though have higher distance have less comparative rates. These are represented as troughs in the otherwise ascending freight graph. For example, New Delhi-Ahmedabad and Kolkatta-Lucknow have the same distance of 1300 KM but the freight for the former is Rs. 790 and for the latter 863.

Table 3.5**Truck Freight rates for some representative OD Points**

Sr.No.	Origin	Destination	Freight/tonne (Rs.)	Distance (KM)	Freight/tonne/ KM (Rs.)
1	New Delhi	Jaipur	500	267	1.87
2	Chennai	Bangalore	875	288	3.04
3	New Delhi	Lucknow	1,100	430	2.56
4	Mumbai	Ahmedabad	1,150	502	2.29
5	New Delhi	Ahmedabad	1,300	790	1.65
6	Mumbai	Bangalore	1,850	822	2.25
7	Kolkatta	Lucknow	1,300	863	1.51
8	Mumbai	Jaipur	1,800	964	1.87
9	Mumbai	Lucknow	2,600	1,260	2.06
10	Kolkatta	Jaipur	1,850	1,395	1.33
11	Chennai	Ahmedabad	2,219	1,407	1.58
12	Kolkatta	Bangalore	2,660	1,534	1.73
13	Chennai	Lucknow	3,467	1,534	2.26
14	Chennai	Jaipur	3,125	1,630	1.92
15	Kolkatta	Ahmedabad	2,300	1,638	1.40
16	New Delhi	Bangalore	3,400	1,735	1.96

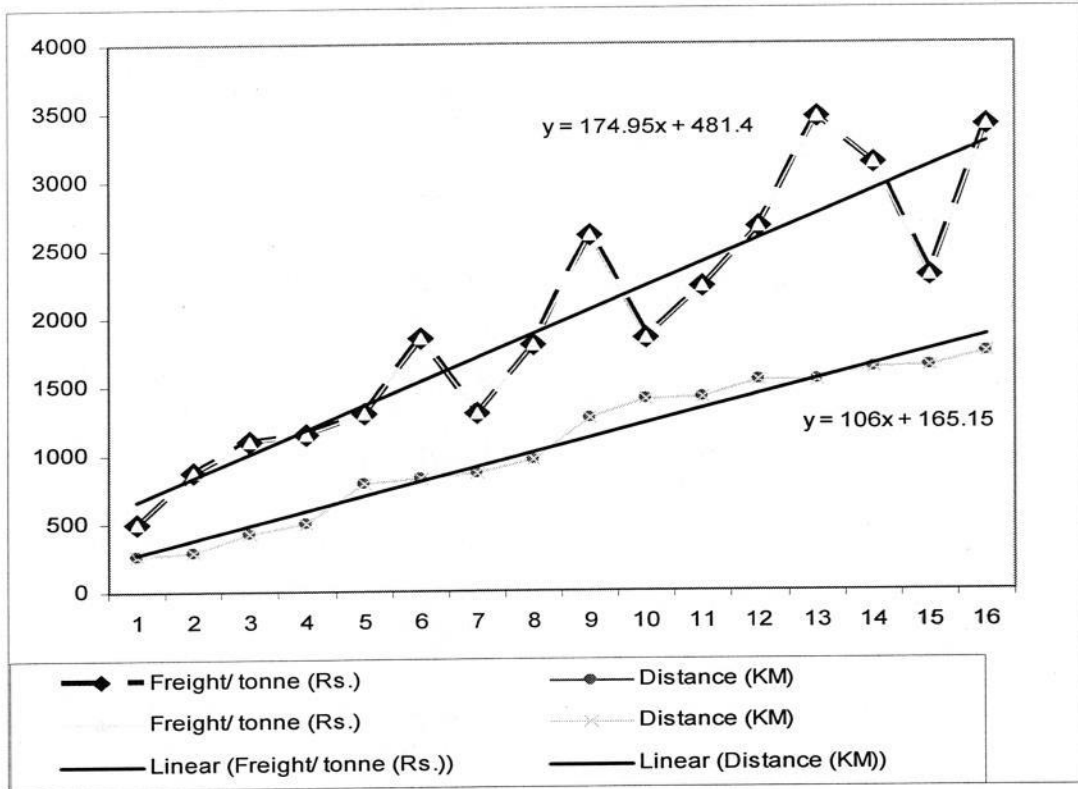
Source: www.infobanc.com and www.incrediblerealindia.com

Construction of trend line for distance and freight charges shows

(Figure 3.8) that with increase in distance between the OD pairs

the freight per tonne per KM does not necessarily reduce proportionately as the two trend lines are not parallel.

FIGURE 3.8 CORRELATION OF TRUCK RATES WITH DISTANCE



This analysis brings out some interesting points:

1. The truck freight rates show telescopic tendencies which are not uniform with increase in distance.
2. The freight rates are dependent not only on distance but also vary with OD points.
3. For two OD points having same distance the freight rates may be different. This is in stark contrast to the IR charging principles.

3.4.3. DYNAMIC PRICING OF IRON ORE FOR EXPORT

Indian Railways did a truly dynamic pricing exercise with regard to export for iron ore. In 2008 a sudden spurt of export in iron ore was noticed. The data was analysed and it was found that there is a consistent demand for export of iron ore.

An analysis was done of the prevailing iron ore prices and an index was created by linking the freight rate with the commodity rates. These were being monitored on a monthly basis and the freight rates were accordingly modified every month. Later when the commodity prices reduced Railway Board initially took some time but then responded to the market and reduced its freight rates. Table 3.9 (page-65) gives a summarized position of the movement of rates for a specific lead. This was true movement of tariff to the demand lead market forces. This linkage to the demand of a commodity with the freight rates was instrumental in generation of substantial revenue for Indian Railways.

3.4.4. LOSS IN PASSENGER TRAFFIC

Table 3.6 shows that Indian Railways has consistently suffered losses on account of coaching operations. Though earnings have shown increase but the expenditure has also increased on a regular basis.

Table 3.6**Loss in coaching operations**

	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Earnings	15045.62	15896.26	17420.34	20419.14	22722.01	26088.09
Expenditure	20826.46	23829.47	23986.47	26711.34	30244.46	40045.88
Profit/Loss	-5780.84	-7933.21	-6566.13	-6292.2	-7522.45	-13957.8

Source: Vision 2020 of Indian Railways

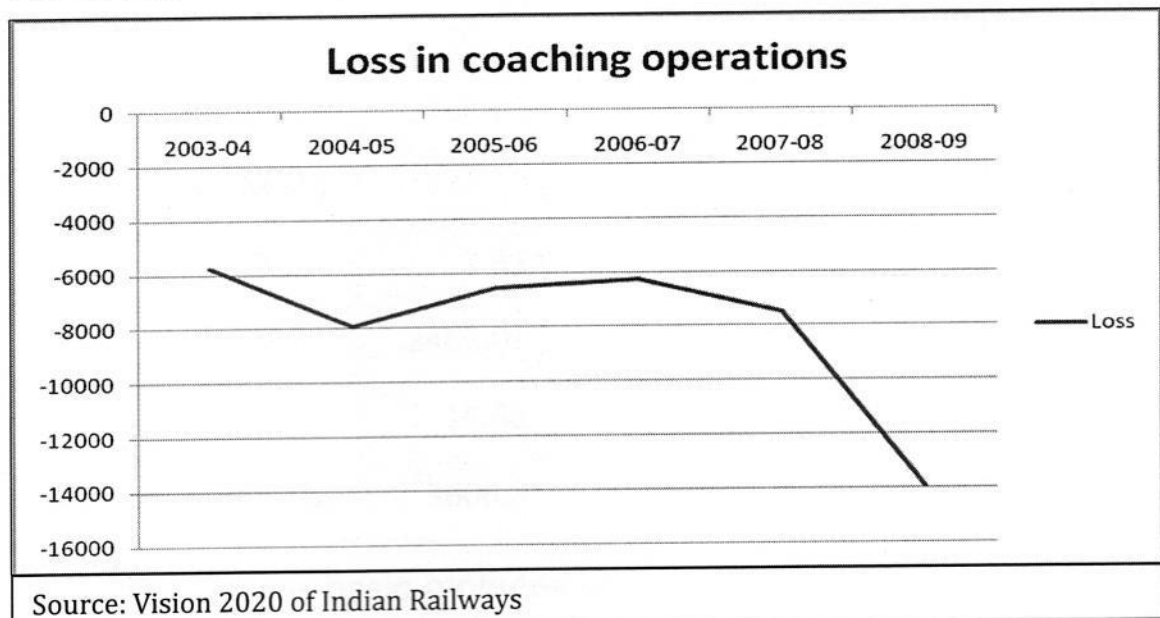
From table 3.7 it can be seen that on year on year basis the earnings and expenditure have increased. There is an aberration in 2005-06 wherein the expenditure has increased by only 1% over the previous year and once again in 2008-09 wherein the expenditure has increased by 32% whereas in other years it has hovered around 11%-14%. Reasons for the abnormal decrease and increase in expenditure in 2005-06 and 2008-09 respectively need to be investigated. The losses showed a reduction on 17% and 4% in 2005-06 and 2006-07 respectively over the previous year. For 2005-06 this was probably due to increase of expenditure by only 1% whereas the earnings showed a robust increase of 10%.

Table 3.7**Percentage Variation in Earnings, Expenditure and Losses over previous year**

	2004-05	2005-06	2006-07	2007-08	2008-09
Earnings	6%	10%	17%	11%	15%
Expenditure	14%	1%	11%	13%	32%
Loss	37%	-17%	-4%	20%	86%

Source: Vision 2020 of Indian Railways

Loss in coaching operations showed a marginal reduction in 2005-06 and 2006-07 but prior to and after these years the losses have shown increase once again as can be seen from the Figure 3.9.

FIGURE 3.9

3.4.5. CLASSWISE ANALYSIS OF PASSENGER DATA

Table 3.8
Passenger Data Analysis for 2010-11

	No. of Pass. in Million	Pass. KMs (Million)	Earnings (Rs. In Crs.)	Earning per pass. (Rs.)	Earning per PKM (Rs.)
Suburban					
1st Class	246.28	8836	247.76	10.06	0.28
2nd ord	3977.94	130309	585.09	1.47	0.04
Total	4224.22	139145	832.85	1.97	0.06
Non-Suburban					
AC 1st Class	2.46	1415	339.81	1381.34	2.40
AC sleeper	18.59	15272	1729.47	930.32	1.13
First Class M&E)	1.73	1313	83.39	482.02	0.64
First Class Ord.	5.85	750	25.94	44.34	0.35
AC 3 Tier	48.18	37134	3555.89	738.04	0.96
Sleeper Class (M&E)	266.61	212919	6849.45	256.91	0.32
Second Class (M&E)	777.56	304366	6621.79	85.16	0.22
Sleeper Class (Ord)	7.73	3257	84.83	109.74	0.26
Second Class (Ord)	2462.01	285420	4403.15	17.88	0.15
ACC	15.58	6116	597.61	383.58	0.98
Total Non-Suburban	3606.3	867962	24291.3	67.358	0.27987

Analysis of three basic attributes of passenger data namely No. of passengers, Passenger KMs and Earnings for different classes

has been done in Table 3.8. Subsequently two derived data namely earning per passenger and earning per PKM have been arrived at and analysed. The earning per PKM in 1st Class is 28 paisa which is nearly equal to that of ordinary sleeper class where it is 26 paisa. The category of people which use these two services are widely different. Similarly the earning per PKM for 2nd ordinary in suburban is 6 paisa which is less than half of 2nd class ordinary in non-suburban where the earning is 15 paisa per PKM. There is a need to correct the above anomalies in order to ensure that realistic price is fixed and the user pays for the cost of service.

Further analysis of the earnings per PKM for all classes has been done as shown in Figure-3.10. An interesting insight can be obtained from seeing the peek in the case of 3-tier AC. It is seen that the earning per PKM from 3-tier AC is 85% of AC sleeper, however the capacity of a 3-tier AC coach is 33% more than that of 2nd-AC sleeper. This clearly brings out the point that 3-tier AC is nearly 13% more profitable than 2nd AC sleeper class in the present fare structure. Indian Railways should utilise this insight and aggressively induct more and more 3-tier AC coaches. Similar trend is seen in earnings per passenger as shown in Figure 3.11.

FIGURE 3.10

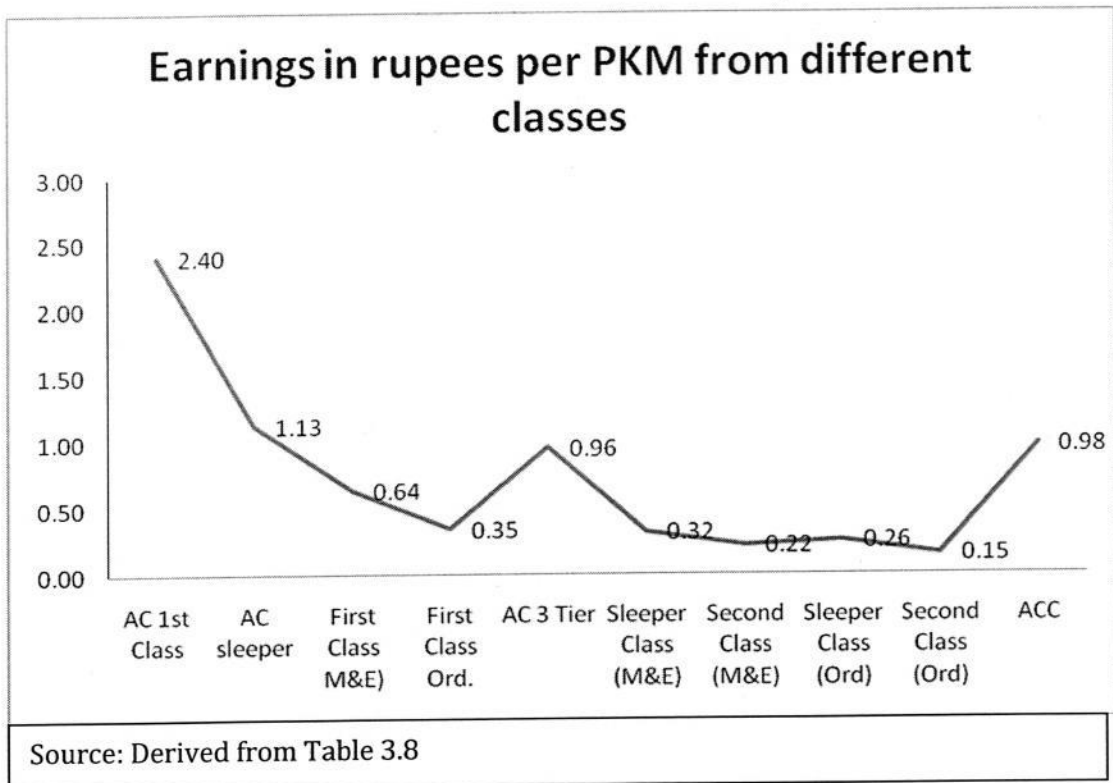
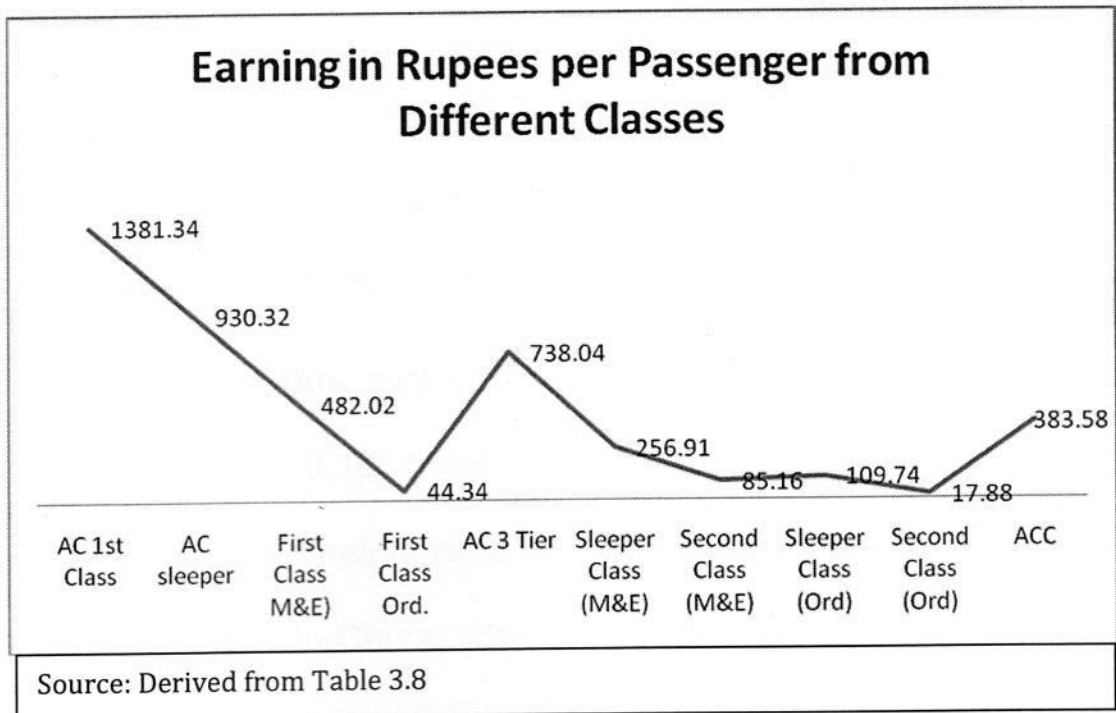


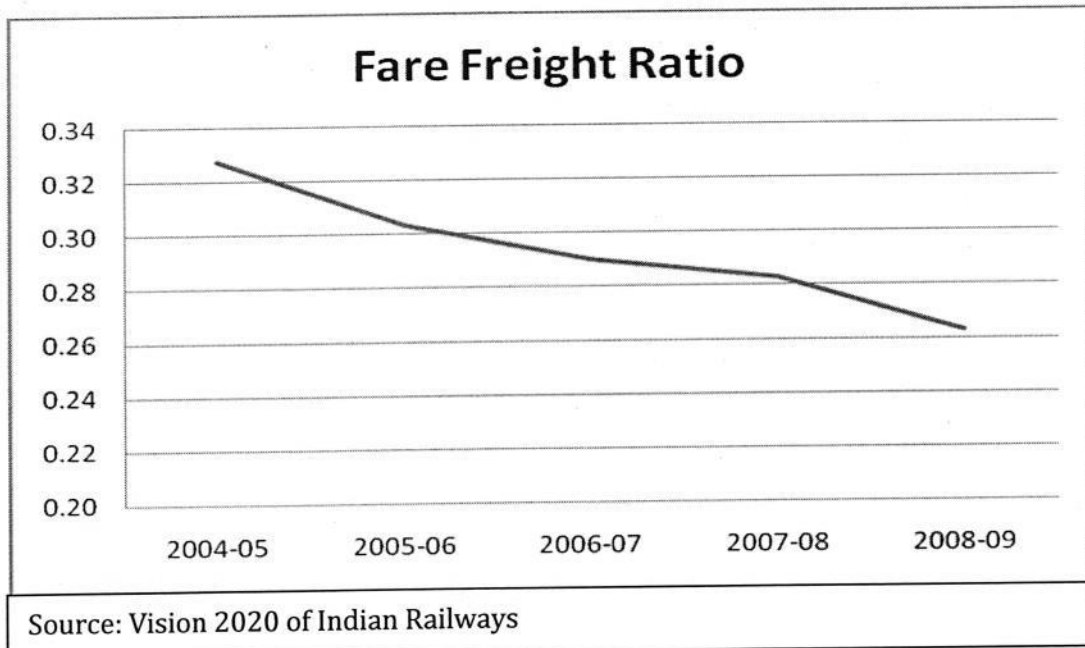
FIGURE 3.11



3.4.6. CROSS SUBSIDISATION

There has been a continuous fall in the fare freight ratio in the 5 years under consideration from 0.32 to 0.26 as shown in Figure 3.12. This shows that over this period the freight rates have been

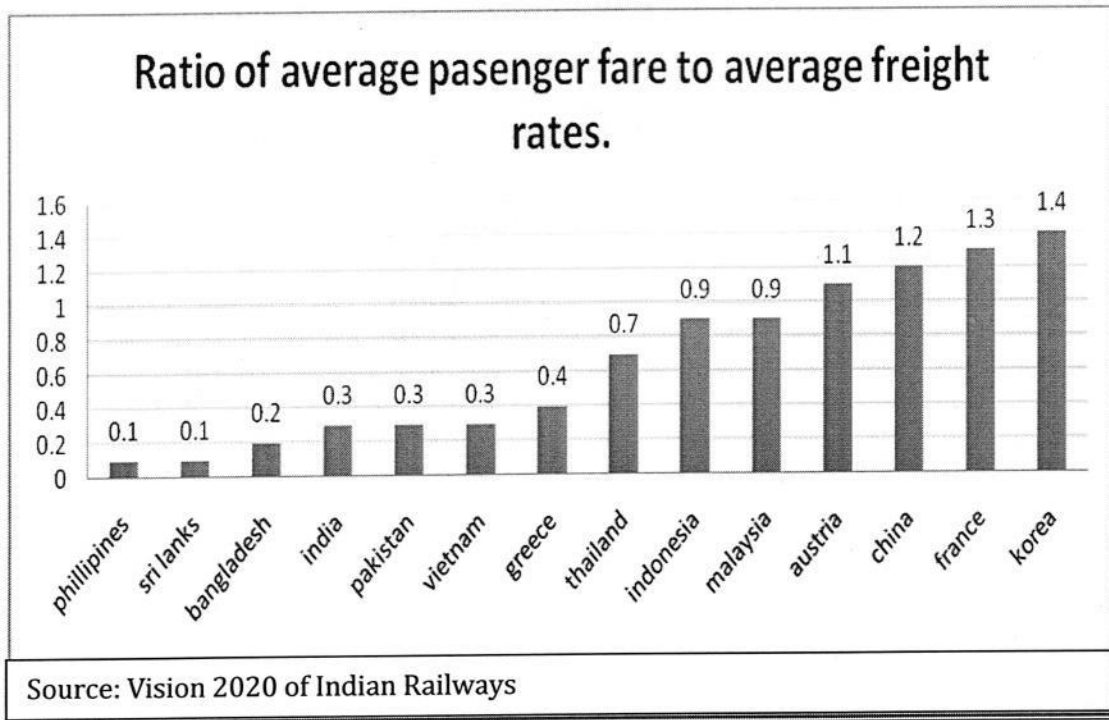
FIGURE 3.12



increased and the passenger fares have either remained constant or reduced. Since the organisation still showed profit it is clear that cross subsidisation was taking place.

Comparison of fare and freight rates across some countries is shown in Figure 3.13. It can be seen that in India the fares are barely 30% of the freight rates and only three countries have lower ratio than India. In China, which is comparable to India, the fares are 1.2 times the freight rates.

FIGURE 3.13



3.5. CONCLUSION

Many insights can be gathered from the historical evolution of the study of tariff fixation exercise. Even during the pre independence era the concept of a spread of rates was existing to enable the companies to quote competitive rates. During the period 2002-2005 a number of initiatives were taken to rationalization the various aspects of passenger and freight tariff. However, after that this area of Indian Railways has not seen much innovation except for the dynamic pricing applied for iron ore for export. The fare-freight ratio has deteriorated and the losses on account of passenger operations have increased substantially. Indian

Railways need to learn from these issues and take corrective steps before the time runs out.

The above deliberations and the learning points have been used in formulation of recommendations at Sr. No.4, 10, 12, 13, 14, 15, and 16 in Chapter-5.

Table 3.9

Increase in Freight Rates of Iron Ore for Export (At Av. Lead of 560 kms)

S.No.	Date of Implement	Class	Frt/Tonne (Rs.)	Dist.Base charge at av.lead		Export charge (Rs./Tonne)	Busy Season charge (Rs.)	Dev. charge 2%	Total Frt/Tonne (Rs.)
				%age	(Rs.)				
1	01.04.2005	140	471	0	0	-	0	0	471
2	15.05.2005	160	538.2	0	0	-	0	0	538.2
3	01.12.2005	180	605.5	0	0	-	0	0	605.5
4	01.04.2006	180	605.5	10%	60.55	-	0	0	666.05
5	01.11.2006	180	617.4	10%	61.74	-	24.7	0	703.84
6	01.04.2007	160	548.8	21%	115.25	-	32.93	0	696.98
7	01.07.2007	180	583.1	21%	122.45	-	34.99	12.36	752.9
8	01.10.2007	180	583.1	35%	204.09	-	40.82	12.48	840.48
9	01.12.2007	180	583.1	60%	349.86	-	40.82	12.48	986.26
10	01.04.2008	180	617.4	100%	617.4	-	43.22	13.21	1291.23
11	22.05.2008	200X	1543.5	0	0	-	108.05	33.03	1684.58
12	01.10.2008	200X	1543.5	0	0	-	108.05	33.03	1684.58
13	06.06.2009*	180	617.4	25%	154.35	-	54.02	16.52	842.29
14	06.08.2009	180	617.4	25%	154.35	200	68.02	20.8	1060.57
15	17.03.2010	180	617.4	25%	154.35	500	89.02	27.22	1387.99
16	01.04.2010	180	617.4	25%	154.35	600	96.02	29.36	1497.13
17	01.05.2010	180	617.4	25%	154.35	700	103.02	31.5	1606.27
18	01.06.2010	180	617.4	25%	154.35	1000	124.02	37.92	1933.69
19	27.01.2011	180	642.1	25%	160.53	1500	161.18	49.28	2513.08
20	03.03.2011	180	642.1	25%	160.53	1600	168.18	51.42	2622.22
21	15.10.2011	180	642.1	25%	160.53	1600	240.26	52.86	2695.75