

CHAPTER – IV

Railways

Railways, the unique wonder of the modern engineering science, suitable for long distance level, as the main artery of inland transport, was the gift to India by the British. Railways were the product of necessity and ingenuity of Industrial Revolution which had taken place in England in the second half of the 18th Century.

The first railway line of the world was opened in England in 1825 and the first railroad in Europe started between Liverpool and Manchester in 1830.

In India, introduction of railways was not developed before 1843, as the East India Company Government together with the British Government (Britain) had not decided to encourage the construction of railway. In 1831-1832, for the first time, the idea of railway construction was put forward but that railway was to depend for its haulage power on animals. It was the period that the English were thinking of cheap raw materials i.e. cotton from India as well as considering it a suitable market for their finished goods. Moreover, the Parliamentary Reforms of 1832 gave impetus to these ideas. Lord Dalhousie, (1846-1856) the Governor General of India, the "Father of railway system" in India, visualized the prospect of Indian cotton for the English textile mills and of a vast market for finished goods. An outlet was given to the British surplus capital by investing in railway expansion programme. It was to help for the rapid mobilization of troops for the defence of the empire against internal rebellion and from the external invasion. Thus, railways were developed without any consideration for the welfare of the Indians.

Steam railways for India were; for the first time, projected in 1843. A proposal was made for a railway line from Calcutta to North-West Frontier by MacDonald Stephenson in Bombay. George Clerk proposed to connect Bombay with Thane and it was approved by a meeting of Bombay citizens.⁻¹

1. Amba Prasad, Indian Railways Delhi (1960) P.2

Lord Dalhousie, President of Railway Board in England arrived in India in 1848, as the Governor General of India. His famous Railway Minute (20 April 1853) was the "Text Book" for railway project in India ² Lord Dalhousie, in his Railway Minute, laid down the board direction in which the construction, management and finance of railways was to be undertaken. He suggested the construction of railways should be turned over to private companies working under Government supervision and control and guaranteed a rate of interest on capital. He also recommended the replacement of policy of experimental lines by a policy of constructing trunk line connecting the interior of each of the three presidencies with principal parts.

East India railway company and the Great Indian Peninsula railway company were formed in 1845. On 31, October, 1850 the ceremony of turning the first sod for the construction of the Great Indian Peninsula railway from Bombay to Kalyan was performed by J.P. Willoloughby, Chief Justice of Bombay. By 1853, a railway line from Bombay V.T. Rajniganj to Thane, a distance of 21 miles, was opened for traffic and the first railway train in India was inaugurated on 16th April 1853 when 14 railway carriage was driven by three engines and carrying about 400 passengers. In 1855, the Calcutta – Raniganj line was opened. The first section of Madras railway was opened in 1856. It was a new era in the Indian sub-continent, financed by the British Capital, designed and executed by skilled Indian labourer, the railways became pioneer in various fields in India. Three main types of railway lines were introduced which still exist:

- (i) Broad gauge (1.67 meter)
- (ii) Meter gauge (1.00 meter)
- (iii) Heerring gauge (0.76 0.811)
(Narrow gauge)

2. Hunter W.W., Imperial Gazetteer of India Vol. III P. 373.

The Court of Directors of the company was not favourably taking the proposals of railways projects as they thought that expansion of railways in India would not be successful. But F.W. Simms in his enquiry report wrote that "introduction of a system of rail road was applicable in India because in India there was low value of land, cheapness of labour and general facilities for procuring building materials. These were the factors which were to make railway expansion in India successful". He suggested proper attention should be paid by the Government in constructing and maintaining railways in India. ⁻³

The early railways in the country were constructed and operated by private companies under the Government guarantee of interest. The system of a guarantee began in 1849 under Lord Dalhousie and was continued till 1869. Suggestions for direct state construction were made in 1867. During the period of Lord Mayo the policy of state construction was accepted which started a new era in the history of Indian railways. Under government Guarantee system, it was pointed out by Lord Lawrence that, "the whole profit would go to the companies, and the whole loss to the government. During 1869-1882, the policy of direct state construction was in high favour. In 1871, the British Parliament appointed "Select Committee" to go into the question of railway finance in India".⁻⁴ In 1879, it was declared that lines constructed by new guaranteed railway companies were to be the property of the Secretary of state for India. But the policy of direct state construction of railways failed and new guaranteed system was adopted in 1882 and continued till 1914.

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3. M.N. Das, Studies in the Economic and Social Development of Modern India (1848 - 56) Calcutta, 1959 P. 335.
 4. Sanyal N., Development of Indian Railways Calcutta (1930) P.75

In 1901, T. Robertson was appointed as Commissioner to enquire into railway problem. In 1905, Railway Board was set up in order to exercise government control over company managed railways in matters like standard of repairs, rolling stock, public safety, co-ordination of the railway system, train service, rates and fares.

T. Robertson in his report, recommended to remove evils in Indian Railway management. In 1908, railway department was made independent of the ministry of commerce and industry. It was the period of the commencement of railway profit. Thus, in the beginning of the twentieth century, the British Government, through various inquiry commissions, inquired into matter related to railway construction and management which was to introduce remarkable changes in railway management.⁻⁵

The last phase of the expansion of railways, during the British rule, was the period of transition between and after two World Wars.⁻⁶ In 1920, Indian railway committee was appointed under Willian Acworth which shaped subsequent railway policy. It advised the Government to take drastic step in separating the railway budget from the general budget. Following the suggestion of the committee, the convention was established in 1924. According to the convention, finance of the Indian railways was separated from the General Finance of the Government of India with effect from 1924-1925 in order to secure stability to the general revenue and to introduce flexibility in the administration of railway finance reserve funds for railways was set up. "The separation of the railway budget was the most important reform introduced during the twentieth century in connection with the administration of Indian Railways" ⁻⁷. The Great Economic Depression of 1929 – 30 brought trying period for the Indian railways. The Committee like

5. Thomas Robertson, Report on the Administration and working of Indian Railway, 1903.

6. Sanyal N., Development of Indian Railways Calcutta (1930) P. 193

7. L.A. Natesan, State Management of Control of Finance in India P. 33

Pope Committee (1932) and Wedgwood Committee (1936) were appointed to examine the financial position of the state managed railways and to suggest measures for improvement in earning. The Second World War imposed a severe strain on the railways.

The government of free India appointed the Indian Railway Enquiry Committee under the chairmanship H.N. Kanungo. The Government implemented recommendations of committees and various problems were systematically and scientifically tackled in spite of difficulties created by the Second World War and partition of India. The railways were nationalized and brought under state management in 1953.

Expansion of Railways in the Baroda state

Allied to the subject of industrial development is that of the growth of railways. Baroda state had been in the vanguard of progress and advancement. Even since 1856, during the time of His Highness Maharaja Ganpatrao Gaekwad, the first line of railway was laid of the Bombay, Baroda & Central India Railway (BBCIR) Company, a project which had Ganpatrao's enthusiastic support by making a free gift of lands needed for railway purposes, the policy of the state had been to encourage the extension of railway enterprise. "The state then owned 21.42 miles of broad gauge railway, 330.52 miles of metre gauge and 355.73 miles of narrow gauge railways. The construction of which had cost over 15 crore of rupees." ⁻⁸ In that matter His Highness Maharaja Sayajrao III took the view of the true economist, namely that even if a railway was not directly remunerative having regards to the volume of traffic it carried yet, its existence justifies, if it opened up, a new hinterland enabled its inhabitants to avail themselves of transport facilities for marketing their products. The soundness of this attitude had been borne out by the extent to which the railways have resulted in the development of the interior and have contributed to the well –being of rural districts. ⁻⁹

The construction of railways commenced during the years 1853-1860 and ended in 1922. The district of Baroda is served by 8 railways lines of which 2 are broad gauge and 6 are narrow and serve a vast hinterland comprising Maharastra. M.P. Rajasthan, U.P. and Union territory of Delhi on the one hand Saurashtra, Peninsala and Kutch on the other hand. Further, all talukas of Baroda district with the exception of Tilakwada Mahal were served by at least a railway line. There were 93 railway stations in the district. ⁻¹⁰

8. Narayan Das Tondon, Baroda State P.20

9. Ibid 34

10. Baroda Blue Book Vol. XIII P. 75

Baroda was one of the first princely states to open the railway line in its territory as far back as the 1860's. Besides the British Indian railway, the state had owned its own separate railway. The Directors of BBCIR were authorized by the Court of Directors of the East India Company to execute a survey of their projected line of railway on 10, August 1853.¹¹

The projected line of railway was to open the most effectual general line of intercourse from Bombay, the great western capital and seaport of India through the Central and North – Western district to meet the railway in progress of construction from Calcutta to Delhi, together with all the branches that such a line could require⁻¹²

It was also proposed to adopt the best level which the general structure of the country would admit and to pass through those great obligatory points, which should afford the most convenient junction for branches to meet the broadest mercantile requirement of all adjacent and remote /district.⁻¹³

Baroda had great importance as the railway interest of the British was concerned.

" Baroda is a point that must be passed by the shortest and levellest route that can ever be selected between the seat of the central government of India at Calcutta and England via the Persian Gulf, giving a line from its junction with the Calcutta railway near Allahabad, of the highest mercantile advantages in its whole course through whole central India, combining as it would, the interests of the Sangor and the Nerbudda(Narmada), the Malwa, Guzerat(Gujarat) Rajaputana and Scindhia territories".⁻¹⁴

11. Selection from the records of Bombay Government No. IX Bombay Baroda & C.I. Railway company Bombay Government Publication, Bombay (1885) P.2

12. Ibid P.2

13. Ibid P.3

14. Ibid P.8

It indicates that it was essential for the British government to get support from the Gaikwad rules of the Baroda State. Baroda was an important centre to connect important areas of Western and Central India. Moreover, the Gaikwad rulers had established cordial relations with the British.

In 1853, the engineers of BBCI Rly. Co. completed survey of the areas between Bombay and Gujarat which was commenced at Surat. As the line marked out through the territories of the Baroda State, the consent and co-operation from the Gaikwad was essential to undertake the project. After the negotiation, Ganpatrao agreed to surrender the lands required for railway purpose stipulating only that the private owners should be compensated for the loss of their lands and that there should be adequate guarantee against any loss to Baroda revenue on account of transits duties.⁻¹⁵

Baroda State had to cede full and extensive power and jurisdiction of every kind to main trunk lines passing through Baroda limits.⁻¹⁶ On certain conditions the state could exercise jurisdiction on local lines in Baroda limit. Baroda Government was not allowed to exercise jurisdiction on line lying wholly in the state's limit.⁻¹⁶

There must be one law affecting the administration and the working of a line of railway throughout its whole length. Government of state was not allowed to exercise jurisdiction on line lying wholly in the state's limit. Though, the state's government was better equipped to meet the situation while exercising jurisdiction.⁻¹⁷

15. H.P.O file No. 195/5 p. 1 (Railway in Baroda territories)

16. Ibid P. 30

17. H.P.O. file No. 241-9 P.25

So far as the Gujarat portion of Baroda territory was concerned, jurisdictional rules were modified and there had been a relaxation in rules of jurisdiction. Baroda Government was allowed to retain jurisdiction on portion lying in Baroda limit of local line traversing small bit of foreign limit. The intermingled territories of Baroda and British India were the reason for the strict adherence of the British Government to a rigid and consistent policy regarding railways. Baroda Government had always demanded relaxation of the rigidity and extension of liberal policy.⁻¹⁸

The laws of the Baroda State and their administration had been assimilated to the British system. The Baroda police worked in co-operation with the foreign police. It was unjust and unfair measure adopted by the British Government under the plea of setting up uniform system of railway management while Baroda was in well - equipped condition to do so better⁻¹⁹.

The following were the railway lines in the Baroda territory over which the British Government exercised both civil and criminal jurisdiction.

1. Anand – Tarapur Rly	Narrow Gauge
2. Mehsana – Viramgam Rly	Narrow Gauge
3. Billimora – Kalaamba Rly	Narrow Gauge
4. Khijadia – Dhari Rly	Narrow Gauge
5. Okhamandal Rly	Narrow Gauge
6. B.B.& C.I. Rly	Broad Gauge
7. B.B.& C.I. Rly	Narrow Gauge
8. Tapti – Valley Rly	Broad Gauge
9. Ahemedabad – Prantij Rly.	Broad Guage

18. Lee-Warner, The Native states of India, P.362

19. H.P.O. File No. 195/5 P. 1

Internal autonomy of the state was affected adversely and caused administrative inconvenience. Fiscal revenue such as income – tax, Abkari revenue, receipts from gross etc. on these lines also accrue to the British Government. So, Baroda Government requested for entrusting jurisdiction on portion of all lines passing through the state. The question was left about the jurisdiction on the portion of Bombay, Baroda Central India Rly Rajputana Mehsana main line and Tapti Valley railway passing through the state for future determination.

With regards to construction of railway, Baroda Government faced many problems. Baroda had to follow the direction of the British government in all matters relating to railway and had to obtain permission for construction of railway line even within the state territories. Even the earth work of the railway line as a famine- relief work required prior sanction of the Government of India and any further work in excess of that sanctioned in any situation was restricted strictly⁻²⁰. The power of the state to construct railway line according to its interest was restricted by the Government of India. The state should have its own railway act for working railway lines. His Highness's Government always demanded the lines constructed by the company in the state, the state should be allowed to subscribe the portion of the capital expenditure on the lines within their own limits, and where that was not done they should be given a share of the revenue other than interest on the capital sunk. -²¹

The Government of India was ready to sanction proposal of Baroda's project of Jamnagar–Dwarka Railway unless Baroda Government ceded jurisdiction over it to the British and construct the line on meter gauge⁻²² while giving his opinion on the British action, His Highness Maharaja Sayajirao said, "the state which is most interested in the scheme (Jamanagar–Dwarka Rly)

20. H.P.O. file No. 321 /15

21. Ibid - P.16

22. H.P.O. File No. 322 /4A Railways (1908 - 1914)

and which is going to spend its money and even sacrifice its jurisdiction finds that a railway line of broad gauge than the narrow one is not convenient. Why should the residency then press us to carry out its own wishes." -²³

Another problem regarding railways was the claim of the State for compensation for lands given to the British Government for railway purpose. There were several instances to show that compensation was paid to his Highness's Government for alienated lands taken up for B.B.C.I. Rly. In several cases when compensation was either partially or totally refused by the British Government.

A Tippan was submitted in 1901 to the H.P.O. by the Revenue Department in the matter and while passing order thereon Sayajirao Gaikwad observed that "wherever we have to pay compensation to private person for lands ceded for railway purpose, the amount of such compensation to be paid, should come out of the coffer of the Railway concerned than of the state." -²⁴

Baroda Government was required to pay for any land outside their territory whenever required for railway construction by them. Moreover in future the compensations were bound to be less than expected by the Baroda Government. -²⁵

23 H.P.O. File No. 322 /4A Railways (1908 - 1914) P.25

24. H.P.O. file No. 108 /1, 2,3 (Railway) P.32

25. H.P.O. File No. 165 (Railways)

In short, when the B.B.C.I. Rly. first constructed railway line in 1856, the Baroda Government had agreed to cede to the British Government necessary lands in its territory, on the condition of compensation. But compensations given to Baroda were trivial.⁻²⁶ Baroda was subjected to unjust restriction in the matter of railway. In construction of railway lines and stations, the interest of the state was neglected altogether. More than the interests of the state, such as the protection of the paddy land or the development of a remote village, the British Government gave priority to the convenience of cotton merchants and gin owners in the state and in the adjoining British districts always could find in the Resident and railway management board, sympathizers for their cause as against the public interest of Baroda. Baroda had to stop the work of Kosamba station more than once due to intervention of the Resident and railway management to give convenience to a cotton merchant.⁻²⁷

In the year 1908 the government of Baroda created its own Department of Railway. From 1908 the State began to undertake railway construction and develop its own policy.⁻²⁸

Problem regarding jurisdiction over railways lines and payment of compensations was discussed in 1909 with the Government of Baroda and agent of B.B. and C.I. Rly Co. When the President of Railway Board visited Baroda in 1909, His Highness Government was given assurance for duly compensation and jurisdictional rights of the state.⁻²⁹

26. H.P.O. File No. 332 /4B Railways P.33

27. Ibid P.24

28. Ibid -p. 25

29. Ibid

Gaekwad's Dabhoi Railway

(1873 to 1921)

Sr.	Section	Years of Opening	Mileage
1.	Miyagam Branch		
	Miyagam to Dabhoi	8 th April 1873	20 miles
2.	Chandod – Dabhoi Jambusar	1879	59 miles
	(i) Chandod to Dabhoi	1881	17 miles
	(ii) Goya Gate to Visvamiitri	1880	
	(iii) Dabhoi to Goya Gate	1880	7 miles
	(iv) Visvamiitri to Padra	July 1897	9 miles
	(v) Padra to Mobha	July 1903	
	(vi) Masar Road to Jambusar	May 1904	
	(vii) Mobha to Masar road	Nov 1904	
3.	Dabhoi – Bodeli Extension		
	(i) Dabhoi to Gojapur, Bahadarpur	Sep. 1879	
	(ii) Gojapur Bahadarpur to Bodeli	Jun. 1890	
4.	Dabhoi Extension		
	(i) Dabhoi to Jarod	Nov. 1913	23 miles
	(ii) Jarod to Samlaya	Dec 1915	5.4 miles
	(iii) Samlaya to Timba	Feb, 1919	33.33
	miles		

5.	Miyagam – Masar Extension		
	(i) Miyagam to Masar	Jan. 1912	23 miles
6.	Choranda – Koral Section		
	Choranda to Koral miles	Nov. 1921	11.68
7.	Petlad – Vaso Railway		
	(i) Petlad to vaso miles	Dec. 1914	15.17
	(ii) Petlad to Pinil	April 1915	3.5 miles
8.	Petlad – Cambay		
	Anand to Tarapur		
	(i) Anand to Petlad miles	May 1890	13.17
	(ii) Petlad to Tarapur	June 1901	8.7 miles
	Motipura Tankhala Rly. 29.29miles	April 1922	
	Petlad - Bhadran Rly	April 1922	13.14 mile

Baroda State was the pioneer to initiate and develop railway system⁻³⁰.

30. H.P.O File 180/ 10

The British Government was prepared to allot an amount equivalent to any loss to transit duty for an agreement with the Government of Baroda. (But problem was of estimating and providing any loss in the transits caused by the opening of railway as the same amount had to be parallel to the additional custom revenue due to increased facilities afforded to commerce.)

In 1869 an agreement was signed by Khanderao Gaikwad and the BCCI Rly. In 1876 the lands taken up by the BCCI Rly co. was ceded to the British Government together with civil and criminal jurisdiction⁻³¹

In 1861 the Directors of B.B. and C.I. Rly England presented Khanderao with state sovereign as acknowledgement of assistance received during the period of Mutiny (1857). Khanderao Gaekwad was the first ruler who initiated a regular railway system.⁻³²

The B.B. & C.I. Rly company worked on the line of railway that belonged to His Highness Government which ran from Miyagam junction to Dabhoi junction and then to the Vishvamitri junction which was famously known as " Gaekwad's Dabhoi Railway" ⁻³³

The branch railway line between Miyagam and Dabhoi was constructed as a light tramway worked by bullocks, later on it employed engine power with three small engines, obtained from England.

In 1869 construction of regular railroad from Karjan to Dabhoi and Bahadarpur was proposed. It cost Rs. 12 lacs. It was proposed by the Bombay Government in March 1869. Dabhoi tramway was proposed to have put into throughout repair. It cost Rs. 70,000. His Highness's Government

31. H.P.O. file No.189/ 8,10,16, 17

32. Ibid

33. Section from the Records of His Highness Government No. XVIII Vol.II on "Railway", printed at J.B. Mazban & co. steam printing work, Bombay (1893) (1869 - 1873) P.1

agreed to economise the 2'6 gauge. The bridges were repaired and strengthened, station-building, quarters etc were built. The line was thus made ready. Gaekwad's Dabhoi Railway's first section was opened for traffic in April 8, 1873 of 20 miles. Gaekwad's Dabhoi Railway section was extended from 1873 to 1922.

It was important to develop definite mode of transport for Baroda divisions. One of the important centres of market i.e. Dabhoi contained population of 15,000 in 1870. Baroda Government proposed to convert the Dabhoi tramway into light 5'6 railway and would cost 1,13,952 after the project. With a fair goods and passenger traffic the branch worked as separate road on the narrow gauge with the utmost care and economy. The portion of Chandod-Bahadarpur line was damaged by the flood 1878. It was repaired and Rs. 3,188,23 was spent.⁻³⁴

Baroda and Dabhoi line was extended by providing station at Kelanpur of 12 miles far from Dabhoi and 6 miles from Bahadarpur on the line of cotton producing areas. Extension of Dabhoi line of 5 inch 2'6 gauge was proposed to Bahadarpur and Chandod. Chandod – Dabhoi Jambusar railway was opened for traffic in 1879 of 59 miles. Goya gate to Vishwamitri line was opened in 1880. In 1881 Chandod to Dabhoi was opened for traffic.⁻³⁵

Before 1880, railway lines in Baroda division was known as "Baroda Railway". In 1880, those railway lines were given title by the B.B. & C.I. Rly company as "His Highness, Gaikwad's state Railway" and popularly known under this title thereafter. In July 1880, extension from Dabhoi to Baroda was done and it cost Rs. 1,08,905. Railway borne earning in 1879 was Rs. 32,579 (gross earning) and gross expense was Rs. 26,131 while in 1880 gross earning was Rs. 49,060 and gross expense was Rs. 20,131. The locomotive

34. Section from the record of the Baroda Government "Railway" (1869 - 1878) RNO. 7014 of 1878 - P. 275

35. B.B. & C.I. Letter No. 4118 dated 28-8-1877

Expenses+ increased under running expense and fuel which was directly affected by the increased engine mileage run during 1879-80 with the opening of the Dabhoi - Goya Gate section with three new stations at Bhilapur, Kelanpur, with Goya Gate.⁻³⁶

1879 – 1880 P.W.D Rly. Records Voll. 21 Bombay ⁻³⁷

	Traffic (Outwards and inwards)		Cost of Working		Percentage of Cost to Traffic.	
	1879	1880	1879	1880	1879	1880
	Rs.	Rs.	Rs.	Rs.	%	%
Miyagam Junction	7,253	2,121	1,202	1,135	16.57	53.51
Karwan	1,729	2,115	454	414	26.26	19.57
Mandala	883	1284	458	410	51.87	31.93
Dabhoi Junction....	14,937	15,639	962	872	6.44	5.58
Tel Talao ....	.....	807	.....	170	.....	21.07
Chandod Terminus	12,421	22,723	600	682	4.83	3.00
Bahadarpur do.	3,134	11,133	371	632	11.83	5.68
Bhilapur....	.....	839	.....	363	.....	43.27
Kilanpur ....	.....	407	.....	268	.....	65.85
Goya Gate Terminus ....	.....	25,782	.....	482	.....	1.87
Total	40,357	82,850	4,047	5,428	10.03	6.55

36. P.W.D Railway Record on Baroda State Railway Vol. 21 1880) C.N. 107) by W.I Lebraton (Examiner of Railway Account) Bombay dated. 3/5/1181 printed Government central Press Bombay P.1.

37. Ibid P. 5

The above table shows the percentage of cost to traffic dealt with fall at every station except the Miyagam Junction where it rose from 16.57 to 53.51. This was entirely due to the fewer number of passengers making use of junction. Those from Dabhoi, and its neighborhood proceeding to Baroda vice versa then making use of direct line to Goya Gate formerly were booked via Miyagam junction. People were taking advantage of railway which were constructed to develop convenient mode of transport.

	Passengers Outwards		Passengers inwards		Goods outwards		Goods inwards	
	No.	Rs.	No.	Rs.	Tons	Rs.	Tons	Rs.
1879	10,895	3,966	9,149	3,175	13	29	25	54
1880	3,394	1,093	2,603	860	5	13	64	135
Decrease in 1880	7,501	2,873	6,546	2,315	8	15	39	81

The traffic at the Chandod Terminus station which was opened in April 1879 was increased from 12, 421 to 22, 723. Terminus at Bahadarpur was opened in September 1879, where traffic was divided equally between goods and passengers while at Chandod nearly 90 percent of total traffic. ⁻³⁸

38. P.W.D Railway Record on Baroda State Railway Vol. 21 1880) C.N. 107) by W.I Lebraton (Examiner of Railway Account) Bombay dated. 3/5/1181 printed Government central Press Bombay P.5

	Passengers		Goods.	
	No.	Rs.	Tons.	Rs.
Outwards	30,816	10,892	118	280
Inwards	33,264	11,784	1,612	2,326
Total.....	64,080	22,676	1,730	3,106

This is the figure of business done at terminus at Goya gate in 1879 – 1880. The passenger traffic at Dabhoi was not affected by the opening of extensions to Chandod and Bahadarpur. The great bulk of the passengers traffic was booked in 1880 at Goya – Gate Terminus, which was used by a total number of nearly 65,000 passengers in and out. Receipts from coaching traffic rose from 19,203 in 1879 to 37,553 in 1880.³⁹ People began to take benefit of railway.

39. P.W.D Railway Record on Baroda State Railway Vol. 21 1880) C.N. 107) by W.I Lebraton (Examiner of Railway Account) Bombay dated. 3/5/1181 printed Government central Press Bombay P.7

Station	Numbers booked (inwards and Outwards)				Earnings there from			
	1880	1879	Increase in 1880.	Decrease in 1880	1880	1879	Increase in 1880.	Decrease in 1880
					Rs.	Rs.	Rs.	Rs.
Miyagam Junction	5,997	20044	.....	14047	1,953	7141	....	5188
Karwan	10206	8519	1687	....	1644	1257	387	.....
Mandalal	4067	3662	405	.....	724	646	78	.....
Dabhoi	52864	37,190	15674	.....	11495	8184	3311	.....
Tel Talao	3333	.....	3333	.....	774	....	774	.....
Chandod Terminus	52117	29438	22679	.....	19636	10049	9587	.....
Bahadarpur do.	18267	5844	12423	.....	5423	1469	3954	.....
Bhilapur	5173	.....	5173	.....	799	.....	799	.....
Kilanpur	3270	.....	3270	.....	398	.....	398	.....
Goya gate Terminus	64080	.....	64080	.....	22117	.....	22117	.....
Total	219374	104697	128724	14047	64963	28746	41405	5188

Excess fares	.....	.....	.....		210	122	88	
B.B. & C.I. Railway	22236	29439	.....	7203	7309	8554	.....	1245
Total, excluding Season Tickets	241610	134136	128724	21250	72482	37422	41493	6433
Actual (being moieties of the proceeding)	120805	67068	128,724	21,250	72,482	32,422	41,443	3216
Net Increase in 1880....			53,737	.....			17,530	

Besides passengers traffic, goods traffic was recorded considerable increase in cotton seed, firewood, mowrah, salt, stone, timber etc. Considerable decrease in export import of goods traffic was recorded at Dabhoi and Karwan but it was increased at Bahadarpur Terminus. The train mileage increase from 15,495 in 1879 to 24, 651 in 1880 with the opening of Dabhoi – Goya Gate section of which the first section was opened in 1873.⁴⁰

In 1881 Chandod to Dabhoi of 10.62 miles 2'6 gauge was opened for traffic. Vishwamitri to Padra extension was opened to traffic in 1897.⁴¹

In the year 1883, Rs. 50,000 was paid by His Highness, Government to enable B.B. & .C.I. Rly Co. to carry out improvement at Dabhoi Chandod,

40. P.W.D Railway Record on Baroda State Railway Vol. 21 1880) C.N. 107) by W.I Lebraton (Examiner of Railway Account) Bombay dated. 3/5/1181 printed Government central Press Bombay P.9

41. Baroda State Administration Report of 1896 - 97 P. 82

Viswamitri and Goya Gate on the Gaikwad's Baroda state Railway. The Capital invested was Rs. 13,60,309 in 1885. ⁻⁴²

In 1892, His Highness, Government, in order to provide certain convenience on the Dabhoi Railway at Dabhoi, Chandod and Bahadarpur, requested the Government of India to sanction certain considerable essential construction on the line. His Highness, Government was keenly interested to look after the convenience of the passengers. So they were never satisfied with the existing accommodations at stations of Dabhoi where passenger traffic was considerable in great number and Chandod which was a place of pilgrimage where traffic was in great bulk. So, waiting rooms were proposed at each stations. Additional lower class carriages were also needed on the line. The existing rolling stock was not sufficient for the increasing passenger traffic during occasion of religious fair at Chandod to provide sufficient accommodation to the people in General.

Total mileage was increased in railway from 71.66 miles in 1891 against 59.91 miles in 1890 which was due to the opening of 12.80 miles of line from Bahadurpur to Bodeli on 16th June 1890. ⁻⁴³

1890-1892

	Passengers		Goods	
	Number	Receipts	Tons.	Receipts
1892	226563	Rs. 71,263	34,512	Rs. 70,660
1891	194,507	Rs. 60,726	27,202	Rs. 55,615
1890	172,048	Rs. 53,688	28,774	Rs. 49,597

The number of passengers increased from 1890 to 1892. ⁻⁴⁴

42. Baroda State Administration Report of 1883 - 1884 P. 78

43. B.B.C.I. Railway's Report on Gaikwar's Dabhoi Railway (30 June 1982) P.W.D. Records Vol. 32 P. 224 - 225 (Bombay) (1890 - 92)

44. Ibid P.225

Goods traffic also increased from 1890 to 1892 and thus railway gave impetus to internal trade like raw cotton from Karvan, Mandala and Dabhoi to Surat and Ahmedabad, firewood from Bahadurpur, Bodeli, Grains (wheat), from Dabhoi & GoyaGate, Morwa seeds from Bahadurpur to Surat and Broach, oil seeds from Dabhoi, Bahadurpur and Bodeli to Bombay – Surat.⁻⁴⁵

Expenditure was increased on maintenance of lines, work and station in 1892.

A project for extending His Highness, Gaikwad's Dabhoi Railway from Vishwamitri station to the town of Padra was made in 1890. Baroda Government was desirous of extending the State Railway to Padra. The construction of a bridge and a large portion of the earthwork could, it appeared, be saved by laying the narrow-gauge line over the Vishwamitri bridge between the rails of the broad gauge running it on the existing Padra road.⁻⁴⁶

An estimate of Rs. 1,83,910 for the construction of Vishwamitri – Padra (2'6 gauge, 7.14 miles) was made⁻⁴⁷. There was no road in Padra and the road which was there was nothing but a mere village track. The proposed narrow gauge line was to be treated as an isolated local line ones over which His Highness' Government would have jurisdiction but on one condition that Baroda submitted proposals to make a branch line to Dabka or extend to Kanjat into British territories. Nevertheless, His Highness' Government was determined to provide transport facilities to its subjects. With the opening of extension to Padra, the growth of traffic was considerable large⁻⁴⁸.

45. P.W.D. Rly Vol. 32 A

46. Letter No. 12239 of 18-11-1890 Resident to the Government General for requisition for the sanction of Project of Vishamitri- Padra extension letter dated : 14-4-1890 No. 2783.

47. Ibid

48. H.P.O. file 108-4A Railway Department P.4.

The project of Padra – Ranu extension was proposed in 1896 as a portion of the line from Padra to Mobha 9 miles in length completed in July 1900.⁻⁴⁹

During 1893-1894, there was a considerable increase in the number of coaching traffic and goods traffic. Telegraph earning was considerably increased. Telegraph offices were attached with railway station which led to the growth of modern means of communication.

The increased number of the passengers carried in earning amounted to Rs. 38,251 and Rs. 9,197 and was attributed to a general traffic mainly in lower class.⁻⁵⁰

In 1896, His Highness' Government proposed extension of Vishwamitri – Padra to Mobha. In February 1902, the Government of India sanctioned the construction of the extension from Padra to Mobha by the agency of B. B. & C. I. Railway Co. at the cost of His Highness Government [letter No. 6/OIB dated 12-2-1902, Govt. of India]⁻⁵¹

There was tremendous increase in the number of passengers traveling in Dabhoi Railway's different sections like Miyagam, Chandod, Padra. Jambusar and Bodeli in 1900. Baroda Godhra Chord line, Miyagam Sinor lines were completed. Increase in number of passenger carried by railway and earning from them ascribed to the general development and provided one of the best ways in taking famine relief measures.⁻⁵²

His Highness' Government proposed to extend Vishwamitri–Padra Ranu line to Dabka in order to provide convenience as no port would be opened there.⁻⁵³

49. Padra Ranu extension Report, Railway Records.

50. Baroda State Administration Report of 1893 - 94 P. 68.

51. P.W.D. Rly Records Mumbai Vo. 538 (1898 - 1907) P.3.7 (25-3-1902)

52. H.P.O. (Railway) File No. 168-4A

53. P.W.D. (Railway) Vol. 538 (1898 - 1907) P.43

During 1902-1903 Rs. 22,22,559 was invested after railway expansion on Dabhoi Railway. The total capital outlay on railway line constructed in Baroda district during 1904-1905 was Rs. 24,44,044 and percentage of net earning on capital outlay during the year 1904 was Rs. 5.19 percentage. Dabhoi Railway's Goyagate section was extended by opening line of Padra to Mobha in July 1903 (9 miles) and Mobha to Masar road in November 1904⁻⁵⁴

Bahadurpur – Garda extension was proposed in 1904 by providing a low level bridge over the Orsang river. There was station only at Garda and then, in interest of traffic of branch line to provide a station at Sankheda as a heavy traffic was being anticipated. A fair passenger traffic was expected in addition to stones from Gonghir and cotton and grain from the surrounding villages.⁻⁵⁵

Miyagam – Karjan – Choranda and Moti Koral narrow gauge line was opened for traffic in 1912. In 1908, there was considerable increase in traffic, large bridge on the river Bhukhi and Harsan were constructed, Miyagam – Choranda line was extended. It was done for goods traffic. During the year of 1906-07, the number of passengers booked from Samalaya, Atladra and Alhadpur flag station on Dabhoi railway and adjoining stations Viz. Padra, Vishwamitri, Dabhoi and Bhilapur indicated general increase as well as railway to railway borne earning. Figure of outward traffic was presumably sufficient to show the effect of opening of three flag stations at Samlaya, Atladra and Alhadpur (1 October, 1906 to 30 June 1907)⁻⁵⁶

54. B.B. & C.I. Railway Company's Report on Gaikwar's Dabhoi Railway 31-9-1902

55. Baroda State Administration Report of 1804 -1805 P. 49.

56. P.W.D. Rly Records Vol. 508 (1898-1907) P.1

Miyagam – Sinor railway was a line passing through a well cultivated area through the villages of Choranda, Vemar, Sadheli and Manjhrol to Sinor on the right bank of the Narmada. The line had been set out with the idea of accomodating the villages along the route, hence the deviation from the direct route to Choranda and thence to Vemar where the public road was made and followed as far as possible to Sinor. Two bridges over the Bhukhi and Hassan rivers were constructed. Sinor was cotton producing area and small villages around it were also either served directly or passed near by the line. The supply of commodities from Broach was taken by river to Sinor and was then sent by rail by the opening of line of Miyagam-Sinor Railway ⁻⁵⁷.

There was a remarkable progress in the expansion of railway in the Baroda State during 1910-1911. Miyagam Masaar lines were completed for the passengers' traffic. Railway extension on Dabhoi – Jarod section was extended from Jarod to Samlaya station of Baroda – Godhara chord railway. Lands, which were acquired for the railway purposes, were placed under the special programme of plan for the acquisition of lands, had been prepared. Wastelands were transferred to the railway department.

The Champaner – Pani mines narrow gauge line branch off from Champaner, on the broad gauge Bombay – Delhi Line. The line was constructed for the exploration of manganese in the area. It was worked and owned by the Government of India and was opened for traffic in year 1911. Champaner in Savali Taluka and Pani mines in Jamugam taluka which were the starting and terminating points, were the only twin station falling within the limit of district. ⁻⁵⁸

57. Miyagam Sinor Railway, PDW (Railways) Vol. 189 (1898 - 1907) P. 15.17

58. Baroda State Administration Report of 1910-1911 P. 165

The Chandod – Dabhoi – Miyagam – Karjan – Malsar narrow gauge line of 78.17 km was constructed between 1873- 1912. It passed through major talukas of Karjan, Dabhoi and Sinor of Baroda district into one of the business centers of Baroda. Karjan is an important junction station on Bombay – Delhi broad gauge line. Dabhoi is one of the largest terminuses of meter gauge in the country and an important trade centre, Chandod and Malsar are religious centres on the Narmanda and Karnali another centre of pilgrimage were given sufficient facilities of transport by narrow gauge railway line. The state incurred expenditure of Rs. 8,25,272. ⁻⁵⁹

The Bombay Government proposed the construction of railway line from Vasad to Kathana to open up communication with the town of Borsad via Borsad and Wadeli or Via Dabhasi, Bachasan and Ras to Kathana. Baroda Government pointed out that Vasad Kathana line would affect the earning capacity of Anand – Petlad Rly and Vaso – Petlad – Bhadran proposed line. In 1907, His Highness' Government proposed a narrow gauge line from Vaso to Petlad and Bhadran but the Government of India agreed with the Bombay Government and interest of His Highness's Government was not taken in consideration for constructing Vasad – Khatana railway. ⁻⁶⁰

Prior to 1908, the construction and management of the railway in the Baroda state was entrusted to the B.B. of C.I. Rly. As the steady and significant progress of track and industry in the state compelled the consideration of the urgent need of provision of additional facilities for rapid transport both of men and goods. Baroda Government found it necessary to create its own department of railway. In 1908, the state undertook the construction of its own line and a department of its own railway policy was formed. The chief engineer for Railway was appointed. Tremendous progress

59. H.P.O. (Railway) 108-4A

60. H.P.O. (Railway) 108 / 1, 2, 3

was recorded in railway expansion on 25th March 1919. Viceroy of India laid the foundation of Railway workshop at Goya Gate. The state began to manage and work its own narrow gauge system from 1st October 1921. Large and spacious buildings for railway offices, workshops etc. were built near Goya Gate and it was transformed into one of the busiest centres of Baroda. ⁻⁶¹

Dabhoi Samlaya Timba line was constructed between 1913 and 1919. Dabhoi and Jarod was constructed in 1913. Jarod and Samlaya was opened to traffic in 1915 and Samlaya and Timba line was opened in 1919. Its total length in district is 100.39 km. It passes through Dabhoi, Vaghodiya and Savli talukas. This is very important for Savli and Vaghodia talukas.

Motipura Tankala railway extension of Bodeli Rly was extended. Chorana – Koral of Miyagam – Malsar railway and Masar road was built to Jambusar to join Broach – Jambusar railway of B.B. & C.I. Rly. Petlad – Vaso railway line of 17 miles was opened to traffic in 1913. Vaso – Pij extension of 3.33 miles was also constructed. The section Jambusar – Bodeli was built by the State and that from Bodeli to Chhota Udepur by the Chhota Udepur State and its entire management was with Gaikwad's Baroda State Rly. Dept under an agreement with Chhota Udepur State in 1921. The total length of the line in the district is 138.79 kms. In the district it passes through Chhota Udepur, Sankheda, Dabhoi, Vadodara and Padra Talukas and is linked with adjoining Bharuch district. ⁻⁶²

61. Ibid

62. Baroda State Administration Report of 1913-14 P. 185

Vishwamitri to Goya Gate siding of Broad gauge of 4 miles was constructed in 1917. In 1920 due to heavy rains severe damage was caused to the Motipura – Tankala railway line, ChhuChhapura railway station on the Jambusar, Dabhoi, Chhota Udepur narrow gauge line. It was constructed up to Tankhala of Naswadi taluka in 1922 having length of 38 km. passed through Sankheda and Nasvadi talukas which are largely inhabited by tribal population famous for its lacquer work on wood.

In 1921, Baroda Government took charge of narrow gauge line from the B.B.C.I. Rly and meter gauge line in Kadi in 1933. Diesel electronic rail car was introduced on narrow gauge. It was the first experiment with a view to provide quick journey at a low cost. In 1926, Baroda Government established work shop for repairing locomotive on the modern line.⁻⁶³

Baroda Government made representation to the Government of India for having jurisdiction to be ceded to them on portion of Anand – Petlad (Anand – Ahmedabad) Viramgam line, which was a broad gauge line that was constructed by the B.B. & C.I. Rly in 1862 and extended up to Ahmedabad in 1863 and Viramgam in 1870. The district was only 8.11 km. length between Baroda to Ranoli (BarodaTaluka). From Vasad station onwards the line runs in Kheda and Ahmedabad district and feeds the traffic bound for important places in Kheda and Ahmedabad district Billimora – Kalamba, Ahmedabad- Prantij and Mehsana- Viramgam Rly along with Kathiawad territories.⁻⁶⁴

The total gross earning on the state managed lines during 1926 amounted Rs. 29,09,511 against 26, 62, 276 in 1925. The increase was attributable to the general development of the country served by railways.⁻⁶⁵

63. An Article by R.K. Ranvir from Sayaji Gauravgranth (Baroda) (15 - 12- 1933) P. 347 - 348

64. H.P.O. File No. 195/5 P. 32

65. Baroda State Administration Report of 1926-27 P.219.

The total mileage of railways owned by the State was 695.00 of which 21.42 miles of broad gauge, 68 miles of meter gauge and 368.90 was worked by the State Rly Dept and 251.67 was worked by B.B. & C. I Rly, 37.21 was worked by Jamnagar – Dwarka Rly., 37.22 was worked by the Gondal State Rly. in Kathaiawad. The earning increased to Rs. 23.44 lakh in 1928 as against Rs. 22.35 lakh in 1926-1927.⁻⁶⁶

In 1932, there were 107 railway stations in the whole Baroda State. The total mileage of railway excluding siding but including Bodeli- Chhota Udepur Rly by the state was 707 – 67. (21.42 broad gauge, 330.52 meter gauge and 355.73 narrow gauge) in 1931-1932. During this time there was a considerable extension of meter gauge and narrow gauge line in the state.⁻⁶⁷

Baroda Government had decided to take over the management of the Gaekwad's Mehsana Rly from January 1933 of 265 miles of metre gauge railways of Kadi District. from B.B. & C.I. Railway that worked on a percentage basis with its own rolling stock.

The Baroda State Rly were inspected by the senior Government Inspector of the Railway Department. In 1932, the inspector of Railway Department completed his survey as he was appointed to enquire about the condition of railway and its management. He prepared a report in which it was reported that management was efficient and working satisfactorily.

Motor bus competition was causing anxiety to the administration as it short circuits the traffic in many cases. Efforts were made to safeguard the interest and earning of railways against automobiles without causing undue interference to the public. The attitude of safeguarding railways, considerably hindered road system which was more costly than the railways. The number of railway stations including flag stations was 107.

66. Baroda State Administration Report of 1927-28 P. 22

67. Baroda State Administration Report of 1931-32 P. 25

In 1931, the traffic prospect continued to be unsatisfactory owing to general trade depression. Motorbus competition also continued to affect the railways seriously. There was a decrease of 31, 71, 157 in the number of passengers and about Rs. 52,922 in the coaching earning in the corresponding year 1930. ⁻⁶⁸

There was less inward traffic coming to state railway via Miyagam and Petlad junction as also less outward traffic going via Petlad. Less outward traffic via Miyagam was due to fall in trade and via Petlad was due to the division of traffic over Vasad – Kathana Railway.

In 1912, when His Highness' Government proposed to extend the Vaso – Petlad line to Bhadran, the Bombay Government proposed Vasad – Kathana via Borsad, Wadheli and other via Borsad, Dabhasa, Bochasan and Ras to Kathana. Baroda Government pointed out that the proposed line was likely to affect the earning capacity of Anand – Petlad Rly and Vaso – Petlad and Bhadren line. The Government of India agreed with the opinion of Bombay Government to built Vasad – Kathand line via Borsad, Dabhasi, Bochasan and Uni as it would serve the area between Anand – Petlad Bombay Rly and Mahi river to the best advantage and so the Government of India sanctioned Vasad – Kathan Rly line according to the proposal of the Bombay Government but did not consider reasonable Baroda Government's proposals. It was surveyed by the B.B. & C.I. Rly Co. ⁻⁶⁹

In 1931 – 32, the work in progress was the Girder bridge at the Viswamitri. 3 spans of 60 feet on Goya – Gate – Jambusar section was left over from the general scheme of renewal of Girdar on the Miyagam – Bodeli – Vishwamitri – Jambusar. Viswamitri-Chandod section was renewed and was brought into traffic in 1931-32. Additional waterways on the Dabhoi – Timba railway work were completed.

68. Baroda State Administration Report of 1931-32 P. 205

69. Ibid 207

Petlad Vaso – Pinj and Petlad – Bhadran railway was completed. Accounts of the whole system of Gaikwad's Baroda State Railway were inspected by the traveling inspector. All the stations (104) were inspected. The account of Dwarka railway, Khijadia – Dhari railway were checked by the Jamnagar – Gondal office, Taxes on goods and parcels traffic collected by Gaikwad's Baroda State railway on behalf of Baroda – Petlad municipalities at Goya Gate, Vishwamitri and Petlad Junction. Work of test – auditing, the revenue of Petlad and Mehsana railway was carried out by the staff posted at Ajmer and Delhi. ⁻⁷⁰

70. Baroda State Administration Report of 1931-32 p. 207

No.	Station	Territory	Area in Baroda served.
1	2	3	4
	B.B. & C.I. RAILWAY		
1.	Nadiyad ...	British	Place in the Petlad taluka
2.	Anand	"	" " "
3.	Vasad:	"	" " " Bhadran Peta – Mahal
4.	Palej	"	" " Karjan Taluka
5.	Nabipur	"	" " "
6.	Champaner	"	Savli
	PETLAD CAMBAY RAILWAY		
7.	Karamsad	"	Place in the Petlad Taluka
	G.S. B.Railway Main Line		
8.	Jambusar	"	Place in the Padra Taluka.
	B.B. & C.I. RAILWAY, MAIN LINE.		
9.	Broach	"	Place in the Karjan and Sinor talukas and the Tilakwada Peta –

No.	Station	Territory	Area in Baroda served.
1	2	3	4
	B.B. & C.I. RAILWAY		
1.	Nadiyad ...	British	Place in the Petlad taluka
2.	Anand	"	" " "
3.	Vasad	"	" " " Bhadran Peta – Mahal
4.	Palej	"	" " Karjan Taluka
5.	Nabipur	"	" " "
6.	Champaner	"	Savli
	PETLAD CAMBAY RAILWAY		
7.	Karamsad	"	Place in the Petlad Taluka
	G.S. B.Railway Main Line		
8.	Jambusar	"	Place in the Padra Taluka.
	B.B. & C.I. RAILWAY, MAIN LINE.		
9.	Broach	"	Place in the Karjan and Sinor talukas and the Tilakwada Peta –

			Mahal (by railway and water routes)
10.	Ankleshwar	"	Place in the Mangrol Taluka.
11.	Kim	"	"
12.	Sayan	"	Kathor
13.	Surat	"	Place in the Navsari district.
14.	Amalsad	"	Place in the Gandevi Taluka.
	TAPTI VALLEY RAILWAY		
15.	Bardoli	"	Place in the Mahuwa Taluka
16.	Madhi	"	Place in the Mahuwa and Vyara Talukas.
	B.B. & C.I. RAILWAY		
17.	Ahemedabad	"	Place in the Kadi District
18.	Khodiar	"	"
	VIRAMGAM MEHSANA LINE		
19.	Jotana	Mahikatha Agency	Place in the Kadi District

20.	Kotosan	"	"
	KALOL BECHRAJI LINE		
21.	Bhoyani	British	Place in the Kadi District
22.	Dhanpura	Mahikatha Agency	"

These were the stations in the British territories and Agency areas which served Baroda territory through railways. It was prepared by the Baroda State's Development Commissioner Manilal. B. Nanavati in 1921 about intermingled British - Baroda territory Serving by railways.

Traveling ticket examining was worked under crew system on the all different branches of the Baroda State Railway under the Head.

Government of India had under contemplation a project for connecting Bombay with Sindh by means of a broad gauge railway. His Highness' Government wished to connect the existing meter gauge line into broad gauge line from Ahmedabad to Mehsana – Patan railway.

The number of stations on the Gaikwad's Mehsana Railway was 67. There was a considerable decrease of about Rs. 1,22,562 in goods earning, decrease of 1,37,225 in number of passenger traffic and 2545 in coaching earnings in 1933. It was thought that motorbus competition was one of the most important reasons for the decrease of rail borne trade and passenger traffic on railway. In order to protect railways against it, certain measures were taken. Traffic Railway Administration represented to control the issuing of license for bus etc flying for hire. ⁻⁷¹

71. H.P.O. file No. 59 (Revenue) (1928)

To affect the economy and provide more frequent service to the public a diesel electric car service was inaugurated on the narrow gauge system. In the year 1934 – 1935, a new station Parniwat was opened between Tejgadh and Chhota Udepur on the narrow gauge line.

In 1935 – 1936, total mileage owned by the State was 706.54, 21.24 broad gauge, 329.55 meter gauge, 355.75 narrow gauge.

The earning of narrow gauge marked improvement can be seen in 1936 from Rs. 22, 28 086 in 1935 rose to Rs. 23,59,888 in 1937. The earning of meter gauge declined as a result of unfavorable monsoon condition and motor – car competition. The volume of business handled by railways was best indicated as the principal item of goods traffic on the state managed railways was cotton. ⁻⁷²

72. Baroda State Administration Report of 1936 - 37 P. 239.

	Narrow Gauge Rly.		Meter Gauge Rly.	
Volume of Traffic	1935	1936	1935	1936
Passenger miles	4,02	9,05	7,0477	6,57,60
	76,76	05,966	863	592
Goods traffic net ton miles	1,16,553	1,08,36,936	1,18,47,522	1,11,34,862

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Passenger mile is regarded as passenger traffic and " net ton miles " is regarded goods traffic. It indicates that there was a considerable decrease in the passenger traffic as well as goods traffic in the year of 1938 as compared with the data of traffic in 1935.

A considerable decrease in the volume of traffic of passenger was recorded year by year. The Baroda Government undertook certain measures to maintain the earning from railways. Licences were refused for roads which run parallel to railway or short circuit the railway lines. The measure was taken to minimize competition by motor traffic. The administration also organized additional fast train service where it was needed. In 1937, total cargo handled was 2, 49, 116 tons as against 1, 69, 366 tons in previous year (1936). Import of coal declined from 1, 102 tons and 3, 458 tons. Import of petroleum and export of cement indicated an increase, petroleum from 26, 287 to 36, 103 recorded increase.

No change in railway mileage and a great increase in traffic meant abnormal overcrowding in passenger train, serious bottlenecks in transport and delay and difficulties in movement of goods.

The State-owned 795 miles of railway including Bodeli - Chhota Udepur section of railway which had 21 miles of broad gauge, 346 meter gauge and 428 narrow gauge. The capital invested in railway at the end of 1945 was Rs. 580 lacs. There was considerable improvement in the earning of railways. The earning amount rose to Rs. 116.7 lacs against Rs. 105.5 lacs in previous year (1943 – 44). In 1945, a number of important work was done by providing sufficient facilities to the passengers. Measures of improvement in the condition of railways were undertaken. Extra water ways were provided, bridges were remodeled. Other work on Kalol – Bechraji Mehsana - Taranga-Hill station section, Prachi to Kodinar were done. Permanent way was improved by replacing the existing railway with 50 lbs railways on Kadi – Kalol section. There was an appreciable increase over the figure of the preceding year on the narrow gauge section in coaching and passenger traffic and in the meter gauge railways both in coaching and goods traffic.⁻⁷⁴

Federation and federal railway authority would affect Indian State Rly. to regulate all rail management done by Indian State, safety, maximum, minimum rate and fares, station and service, terminal charge, interchange of traffic and repairability of railway tracks, railway as a carrier of goods, animals and passenger traffic would be kept under Federal Railway authority so the Government of India should ensure uniformity.⁻⁷⁵

The work of installing generating plant at Sanand and Jarod for the supply of electricity to railway was proposed.

74. Baroda State Administration Report of 1945 -1946 P. 170-71

75. Baroda Blue Book Vol. IX P. 17, 19

Navsari Division

Before the introduction of railway in Navsari division the trade and traffic by land was chiefly carried on by carvas made every year and trade by sea was confined to the ports of Navsari on the river Purna and Billimora on the Ambika Rivers. Since the opening of the Tapti valley Railway, the trade was carried on mainly by railways. The importance of Navsari and Billimora as port was reduced by the expansion of railways. Water transport was an important means of transport earlier.

The Kosamba – Billimora section was constructed by the B.B. & C.I. Rly Co. Kosamba, Morali, Navsari and Billimora were important railway stations. The railway line opened in the Navsari division to traffic during the years 1860 and 1869. The aim of constructing these lines was to develop trade and commerce in the areas of Navsari. There were two important railways - B.B. & C.I. Rly. and Tapti Valley Railway. Maharaja Sayajirao encouraged the railway construction to stimulate the trade in the forest area of Navsari. In order to ensure the success of railway, feeder roads were constructed to nearby railway stations of forest and backward area to provide mode of transport. Like other divisions of the State. i.e. Baroda and Kadi railway line run through those districts and felt less need for roads. Feeder roads from the taluka head quarter to the railway station were made ready for making railway network successful.⁻⁷⁶

In 1896, B. B. & C.I. Rly. surveyed for an extension of railway line from Bahadarpur to Songadh quarters (9 ½ miles distance) which involved the crossing of Uuch and Harsan river over which two low level bridges were constructed.⁻⁷⁷

76. G.H. Desai, Nasari Prant P.1 H.P.O. (PWD) file No. 56 Navsari Division P.1

77. Baroda State Administration Report of 1896 - 1897 P. 83

In 1899, His Highness' Government proposed the project of construction of 2'6 gauge railway from Kosamba to Zankhwav via Velacha. The line was constructed by B.B. & C.I. Rly and was opened to traffic in May 1912. Billimora to Rankawav. (13.45 miles) Rankwv to Unai (12.68) and Unai to Kalamba (8.69 miles) The working of the line was entrusted to B.B. & C.I. Rly. It was 35 miles in length. The opening of Kala Amba Rly considerably stimulated the trade of forest produce of forest areas of Navsari. In 1917, Anaval – Mahuwa railway line was proposed of 17.90 in length to develop means of communication in backward and forest area of Navsari. ⁻⁷⁸

Billimora Kala Amba Railway

Section	Mileage	Date of Opening
Billimora to Rankuwa	13.42 miles	3-7-1914
Rankvav to Unai	12.68 miles	3-1-1915
Unai To Kala Amba	8.69 miles	1-1-1917

The construction of railway from Zankvao to Vajpur would cost Rs. 32,46,356 chargeable to His Highness' Government. The cost was very high as it was mountainous to be traversed necessitating heavy banks cutting and bridging. The construction of the whole length was 63.564 miles and it was a continuation of Kosamba – Zankvao Rly project.

78. Baroda State Administration Report of 1913 - 1914. p. 160

After such costly project of railway expansion, it was aimed to provide comfortable means of traffic to areas of dense jungle and backwardness and encourage trade there. In 1908, major bridge work was done on the Kosamba to Zankvao line which was executed by the B. B. & C.I. Rly. Bilimora extension of 35 miles to Rankuwa Unai was proposed in 1911. Kothwala to Bardoli railway line was constructed in 1911 – 12.⁷⁹

In 1922 – 1923, girder bridge on the Mindhola river was constructed. Kala Amba Jhria railway extension, Zankvao- Umarpada extension of Billimora – Kala Amba line was made in 1923.

79. Zankwav - Vijpur Extension P.W.D Railway Record (1898 - 1901) Vol. 556 (Bombay) (1904) P. 3.4

KADI DISTRICT

His highness the Gaekwad's

Mehasana Railway Line

3.3 3/8 (Meter gauge)

(1887 – 1928)

Sections	Date of Opening	Mileage
Viramgam – Mehsana	1-2-1897	40
Mehsana – Vadnagar	21 – 3-1887	20
Vadnagar – Kheralu	12-12-1887	7
Kheralu – Taranga Hill	20-8-1909	7
Mehsana – Patan	20-7-1897	24
Mehsana – Wagrod	15-1-1915	14
Wagrod – Kakosi	28-5-1916	10
Manund Rd. – Harij	23-10-1908	21
Chanasma – Bahucharaji	23-10-1908	16
Vijapur – Kalol	10-6-1902	29

Kalol – Kadi	13-7-1903	12
Kadi – Bhoyani Rd.	1-4-1912	4
Kolosan Rd. – Bahucharaji	1-4-1920	15
Bhoyani Rd. – Kotosan Rd.	1-3-1921	6
Kald – Vijapur – Ambaliyasan	1928	89 Km.

The main block of the Kadi district lies to the west of the Sabarmati and major parts of Mehsana were included in Kadi. It was connected with old land route with Dehgam, Sadra, Prantij, Idar, Pethapur, Kapadvanj, Ahmedabad, Viramgam, Patan, Visnagar, Kalol, Vijapur, Deesa, Siddhpur etc. before the coming of the railways. The province of Kadi was opened on all sides. Each taluka was connected with its neighborhood by broad country cart track for convenience of traffic. The opening of Rajaputana Malwa Railway and the branch lines of railways which were opened by Baroda Government in Kadi led to the misuse of old land route and mode of transport was revolutionised by network of broad and meter gauge railway lines in Kadi.

Railways proved a principal mode of traffic that connect Kadi with other important place in the Baroda State and other parts of the country. Palanpur sections of western Rajputana Rly. Sub-Division through which the Palanpur Section of the state railway run were Kalol, Kadi, Mehsana, Visnagar, Siddhpur.

There was no good road system as the region was sandy and of required materials for road construction from nearby area of the district were not available. Transportation cost of bringing materials from distant places was almost prohibitive unless large funds were made available. The Government of India built a few roads in the North portion of Gujarat to facilitate their administration and military transport. Baroda Government was

not prepared to construct metalled roads in Kadi. Baroda Government under Diwan T. Madhavrao preferred to construct a network of railway in Kadi to meet the requirement of trade and traffic and a large amount was invested for railway construction which was considered suitable and cheaper mode of transport.

In 1877, the Government of India decided to extend the B.B. & C.I. Rly from Ahmedabad to Rajputana. As the railway was to traverse through the Baroda territory of Kadi, Government of India, through the Resident at Baroda requested Baroda Government to give necessary lands for railway track. Baroda Government granted lands free of charge. The era of railway with the support of the Baroda Government commenced in the district with the lay –out of the Rajputana – Malwa railway. It was opened to traffic in November 1879.⁻⁸⁰

In the district, the Government of India constructed only the Ahmedabad – Ajmer Delhi line and all other lines such as Mehsana – Taranga Hill, Mehsana – Viramgam, Mehsana – Patan – Kakosi- Metrana Rd, Kalol – Vijapur – Ambaliyasan, Kalol – Kadi , Bechraji – Chansama, Harji etc. were constructed by His Highness Government popularly known as Gaekwad's Mehsana railway. These were the properties of the Baroda Government till March 1933, Gaekwad's Mehsana Rly was worked by B.B. & C.I. Rly and then it was taken over by the Baroda State.

80. H.P.O. file No. 193/a on Civil and Criminal Jurisdiction over land ceded to the western Rajputana state Railway p. 15

As a result of the different policies, there was a complicated system of railway ownership and railway working in the Baroda State in particular and India in general varying from the state – owned and state – worked and company –(B.B.C.I) owned. An important development was the beginning of the Branch lines which were constructed by the Indian states. ⁻⁸¹

In the year 1880, the Government of Bombay addressed His Highness' Government for the construction of feeder lines in Kadi after the completion of Dabhoi Railway. The Government of India sanctioned Mehsana Viramgam line in 1889. In Kadi, a network of railway line was spread out. The Mehsana – Taranga Hill meter gauge line was opened for traffic from 1887 to 1909. In 1887, Mehsana Taranga line was opened. The line was 57 km. in length. In 1887, a survey was carried out for the extension on Kheralu branch on Vijapur. Mehsana Vadnagar line was opened to traffic in 1887 and Vadnagar to Kheralu and Kheralu to Taranga Hill was opened in 1909. On Mehsana – Taranga line there were nearly nine stations.

The section of Mehsana – Patan Kakosi Metrand Road line was also built in stages and portion of the line i.e. Mehsana to Patan was opened to traffic in 1891.

Mehsana-Okha (Viramgam) of which the section between Mehsana – Viramgam was opened to traffic in 1891. A line was to connect Rajaputana and Kathiawar from Mehsana to Vadhwan via Patdi. It was first proposed by the Rajputana railway. Baroda Government constructed the line from Mehsana to Viramgam.

81. Dutt, R. C., Economic History of India Vol III (1990) P. 451

His Highness' Government requested the Government of India for the sanction of the construction of Mehsana – Viramgam, it was sanctioned in 1889 B.B. & C.I. Rly had constructed the line and was assigned the work of its management. The entire cost of Rs. 1,683,713 was borne by the state. It was to link with the important places in the Kathiawar, like Rajkot, Surendranagar, Dwarka and Okhamandal. ⁻⁸²

There was an increase in the number of passenger carried and in the earning of traffic amounted to Rs. 38,251 and Rs. 9,197 on the Gaekwad's Mehsana Railway attributed to a general development of passenger traffic. The total capital outlay on the line comprising the Mehsana system at the end of 1893 amounted to Rs. 3026,751. Additional siding and good platform were constructed at Patan in 1894. ⁻⁸³

Till 1895 total mileage open for traffic was 92.1/2 miles. In order to check the condition of Mehsana Railway, inspection was carried out in February 1895 prepared by J. Willcocks, a Government Inspector of Railway (Bombay) Because Mehsana Railway was the branch line that linked Ahmedabad – Ajmer Delhi meter gauge Railway. The Mehsana railway line was well – maintained, bridges and culverts were looked after. The mail and telegraph posts were properly numbered. There was no night running train on those branches of Mehsana Railway. ⁻⁸⁴

In 1896, the B.B. & C. I. Rly carried out a survey of Patan – Kheralu line via Siddhpur. B.B. & C.I. Rly prepared an estimate of Mehsana Patan line to Harij or Manund as His Highness' Government requested for it. From the traffic point of view it was profitable. Estimate of Harij- Patan meter gauge line (23.3 miles) amounted Rs. 7,01,004 from Manund to Harij.

82. Desai, G. H., Kadi Prant, 1926 p. 60-61

83. Baroda State Administration Report of 1893 -18 94 P. 102.

84. P.W.D Railway Records, 1893 -1897, Vol. 1191, P. 1

Mehsana Railway of Meter gauge was proposed to be constructed in the year of 1896⁻⁸⁵. of 92 miles consisted Mehsana – Kheralu, Mehsana – Viramgam (40 miles) Mehsana – Patan (24.1/2 miles) Stations, buildings and station machinery were in good number on His Highness' the Gaekwad's Mehsana railway of which total mileage open for traffic was 92 ¾ mileage in 1898. Mehsana – Patan (24 3/4) line was well maintained. Mehsana – Viramgam (40 ¼ miles) was running well and railway stations were in good order. Mehsana Kheralu of 27 5/4 miles line was well maintained. Bridges were in good order. Signals were well maintained and in good working order.⁻⁸⁶

From 1900 to 1901 the work on Kalol – Virpar Railway. Kadi – Kalol and Manund Chanasma Railway was in progress. Kadi – Kalol, line was completed and opened to traffic in 1903. Chanasma – Bechraji was completed in 1908. Ranuj – Chanasma - Harij line of 20 miles was opened in 1908. The work of auditing revenue earning of Mehsana railway was carried out by the staff posted at Ajmer and Delhi. His Highness' Government wished to convert the existing meter gauge line into broad gauge of Mehsana – Patan Railway in 1933. In 1932 – 33 there were 64 stations on the Mehsana railway line. Kheralu to Taranga Hill was already completed in 1904. The entire Mehsana – Taranga Hill line was 57 km in length. It linked taluka head – quarters like Kheralu and Visnagar. Taranga Hill is famous for its Jain Temple which was linked with Mehsana which was a junction station on the Ahmedabad – Ajmer- Delhi and Viramgam-Okha line. There were 9 (nine) stations on this line like Mehsana, Randala, Visnagar, Ganja, Vadnagar, Kheralu, Kadarpur, Varetha, and Taranga Hill.⁻⁸⁷

85. Railway Administration Report of 1896 - P. 82

86. Railway Inspection report on Gaikwar's Mehsana Railway (Bombay) dated 5 Aug. 1898. P.W.D Railway Vol. 1191 P. 1,2

87. Baroda State Administration Report 1900 - 1901 P.186

Baroda State Administration Report 1905 - 1906 P.175

Baroda State Administration Report 1909 - 1910 P.158

H.P.O. File No.191 P.27

Mehsana – Patan – Kakosi line was 80 km in entire length constructed from 1891-1916 as Patan – Wagrod was constructed in 1915 and Wagrod to Kakosi in 1916. There were 11 stations on this line like Mehsana, Panchcot, Dhinoj, Fichal, Manand Rd, Patan, Charup, Wagrod, Dhanawada, Kakosi and Metrana Road. The line linked two district headquarters of Mehsana and Patan.

Kadi – Kalol Bechraji-Chanasma was opened to traffic in stages from 1903 to 1921 with Kotasan to Bechraji, a famous religious place, in 1920 and Bhovani to Kotasan in 1921 linked Mehsana with taluka headquarters on the line.

Kadi-Vijapur Ambaliyan was commenced as a part of the relief work during the great famine of 1899. Kadi-Vijapur section was constructed in 1902 and in 1928 the extension was constructed to Ambaliyan. The entire length was in 89 kms and it linked up Vijapur and Kalol with Ahmedabad and Delhi.

Ranuj – Chanasma Harij branch went on from Ranuj station on Mehsana-Patan Kakosi-Metrana Road line to Harij and Chanasma 1908, Manand Road – Bechraji line was of 25 miles in length and there were 5 stations on the line like Manand Road, Chanasma, Brahmanwada and Bechraji and Modhara Road.

The Kadi division of the Baroda State was provided a large network of railways that served as a solid means of transport and communication. In Kadi railways played an important role in providing transport facilities to the people of Kadi and facilitated transport of men and materials.⁻⁸⁸

All the railway lines except the Ahmedabad – Abu line, were under the Baroda State, Total length up to 1926 was 230 miles and total expenditure after the construction of metre gauge railways was nearly One Crore and Sixty Six thousand rupees and the rail borne earning was Rs. 19,13,000 yearly.

88. Desai, G. H., Kadi Prant 1926 .P. 60-61

These metre gauge lines were directly linked with the Kathiawar states lines and with Ahmedabad up to Delhi. They were worked and managed by the B.B. & C.I. Railway Company. The whole district was well served by a large network of railways. All the railways were meter gauge, no broad gauge or no narrow gauge railway line passed through it. The total length of the railways works out to 411.37 Km. Almost all the talukas were well-served by railways. The construction of railway which was started in 1879 by construction of line for Ahmedabad – Ajmer – Delhi and was completed in 1928. From 1933 the working and maintenance were taken over by the Baroda State from the B.B. & C.I. Rly Co. In free India railways are sectioned under Western Railway according to the regrouping made of railway from 1954.

Amreli Division

Railways in Amreli

The construction and expansion of railway started a little later in Amreli, Baroda State's possession in the Peninsula of Kathiawad including Okhamanalal. It was remotely located from the State Capital i.e. Baroda and it was surrounded by the native states in Kathiawar which was a natural cause of disputes for jurisdiction with the Government of Baroda and the rulers of native states of Kathiawad in exercising sovereign right over the disputed territory. The approval for the construction of Railway line in Kathiawad had to be obtained from the British Government as the paramount power. His Highness' Government was not allowed to exercise jurisdiction even on lines entirely in Baroda limit under the argument that other states in Kathiawad would claim it on their local lines. The rights, privileges and position of all the Indian States, were not alike.

In 1889, His Highness' Government proposed railway line from Khijadia to Amreli to Chalala. Baroda Government was very keen to retain jurisdiction over the railway line after construction. The Govt. of India did not sanction it.

Construction of Mono railway between Amreli on the Dhasa – Jetpur section of Gondal – Porbandar Railway to be worked by animal power could not be materialized. The Shareholders of Jetpur, Junagadh, Gondal and Rajkot put condition of profit making and made the project fail, the project of Amreli – Chital railway on the Dabhasa – Jetalpur section was proposed.⁻⁸⁹

In 1904, Khijadia – Amreli – Chalala Rly on the meter gauge reluctantly agreed to the proposal of Government of India to cede criminal and civil Jurisdiction thereon as a special case and on the under-standing that the Baroda government would be allowed the benefit of any further change in Policy.

89. H.P.O. file No.321/15

The construction of Khijadia – Chalala metre gauge line with length of 59.55 Km was sanctioned in December 1908 and the Khijadia – Dhari line was opened to the traffic in three stages. (i) Khijadia – Gavadka of 26.23 Km in 1913 (ii) Gavadka to Chalala 14.62 Km in 1919 (iii) Chalala to Dhari of 18.70 Km in 1916.⁹⁰

Baroda Government proposal for Jamnagar – Dwarka Rly was not met with favour from the Government of India. The Resident regretted his inability to get it sanctioned by the Govt. of India unless His Highness' Government was prepared to construct meter gauge line British territory and cede all civil and criminal jurisdiction to the Government of India. Baroda was forced to forget its interest in the name of the vital interest of the country.

The Dhola Jetalpur, Porbandar section was opened to traffic in 1881-89. Dhola – Porbandar metre gauge line to Derdi, Dhasa, Rujala, Mahuwa was opened between 1911 and 1922 and it served Amreli and Bhavnagar, connected Rajula with Mahuwa in hinterland of salt work and stone quarries. Rajula city Victor section metre gauge line was opened for traffic during 1927-28 of 126 Km from Rajula to Port Alber Victor. It had a great economic significance as it helped transshipment by rail route of salt and timber. Kunkavav Bagasara meter gauge line of 20 km was opened in 1939. It helped transshipment of groundnut oil, handloom cloths and local products. Prachi Road – Kodinar metre gauge line was opened in 1936. Kodinar is a minor port and trade centre and well-known for sugar factories. Kukawav – Deardi line was opened in 1940, in Amreli, all lines were worked and managed by the B.B.& C.I. Rly along with the states metre gauge railways of Kathiawad.

Karunga – Dwarka – Adatra of Okhamanadal Rly was opened on 13 November 1922 of 37 miles which definitely helped in the transshipment of goods to the Ports of Okha and Dwarka. It was started in 1920 and completed in 1922.

90. H.P.O. file No.321/15 Baroda State Administration Report (1913 -14) P. 179

The era of modernization and expansion of modern transport system may be said to have been ushered during the fifties of the 19th century with the coming of Railway in India.

During the period of His Highness Ganpatrao Gaikwad, railways began to be built in the territory of Baroda who provided co-operation in constructing the first broad gauge line from Bombay to Surat. Ahmedabad railway line provided land for that purpose. Modern transport system was tremendously developed under His Highness Sayajirao III which modernized Baroda and made it one of the enlightened prosperous states of India. The expansion of railway brought economic development and social upliftment.

The increase in the mileage of railway in the state owned by the state itself, by the Government of India and by Private companies was 930 in the post First World War period. It means one mile for every 8.7 sq. miles of area and every 2,286 persons in the population and comprised 2.3% of the total mileage to area which was about 5 times that of the rest of India. The state itself owned more than 706 miles of railway on which it worked in 384 miles. The state had railway workshop which imported large quantities of foreign railway stores for the portion under its own management. The volume of this import amounted to Rs. 46 lakh and it was increased thereafter.⁻⁹¹

The number of passengers carried on the state railways was nearly 96, 16, 179 in 1928 – 30 which was 4 times more than the total population of the state while the corresponding figure for India was nearly 62, 31, 15, 000 or 1.9 times of the population. The figure for Baroda included only His Highness Gaekwad's state railways in Baroda, Navsari, Kadi, Amreli – Okha and did not include the number of passenger carried in limit of the state over railways not belonged to the state such as B.B. & C.I. Railway, the Tapti valley Railway and Ahmedabad Prantij Railway under the Government of India.

91. H.P.O. file No. 55 (Revenue) 1928, p.21

The Baroda Administration Report of 1935- 36 indicated increase in the volume of traffic and mileage of 862 in meter gauge line and mileage of 936 in narrow gauge in the state on state managed lines.

Before 1908, when His Highness's Government established its own railway department for working the line, the railway policy of the Government of India was to strip railroad enterprise, looking to the economic development of state. Earlier the state had no wide advantages of the network of railway, because of inelastic and repressive jurisdiction of the Government of India that rendered railway enterprise either non- remunerative or politically inexpediently. Gaekwad's Baroda State railway's, extension of railway brought tremendous advantages to the Government and its subjects. That is why, the Baroda Government took certain measures to minimize the loss of railway revenue due to motor – bus competition and regulations were imposed to safeguard railways against metalled roads. ⁻⁹²

In the State, railway had proved one of the most efficient and considerable cheap modes of transport. Through railway, transport of men and material was done on a large – scale. Both the people and goods began to make extensive use of the railways.

On one hand, railways were responsible for the promotion of trade, on other hand, it encouraged foreign trade at the expense of internal trade. The trunk lines were sought to link the upcountry trade centre with ports and thereby facilitated the export of raw materials and import of machine-made products.

Expansion of railway created the condition necessary for specialization, thereby it revolutionized production and trade and enable the establishment of large-scale industries on modern line. Though, railways were responsible for the destruction of traditional urban craft and rural industries,

92. H.P.O. file No. 55 (Revenue) 1928 p.22

the railways proved a great boost to many industries such as plantation based industries, coal mining. The cotton textile industry developed along with the railways by opening up the cotton – growing hinterland of Bombay presidency which facilitated the growth of premier industrial centre of Bombay of the Western India.

Extension of railways brought industrial growth in Gujarat and the Baroda State did not remain behind in achieving industrial development. In 1920, the number of large – scale industrial establishments of all descriptions in the state was 169. This gave a percentage of 1.9 to the total number of such industrial establishments in India, which was nearly 8,625. Cotton mills dyeing and bleaching factories, cement works, railway workshop, woolen mill, pharmaceutical works, salt and alkali works, Government printing press, electrical installations, oil mills, cotton pressing and ginning factories were 139 in number. In Kadi, dyeing and calico printing, red Indigo and black colour works, old industries of manufacturing of brass, copper utensil were developed. In Navsari there were cotton mills and sugar factories. Kala Amba Railway in Navsari made the transport of forest produce facilitated and helped in developing forest produce industries such as lac cultivation, Katha manufacturing at Songadh-Vejpur areas of Navsari Railways gave rise to various forest industries like timber industry; manufacturing at Songadh - Vejpur areas of Navsari. Amreli was primarily agricultural and had cottage industries like weaving, dyeing calico – printing, oil mills and manufacturing of ornaments.⁻⁹³

The average daily number of persons employed in industries in the state was 8 of the population whereas the corresponding figure for India was 5 (1930). The decline in transport costs also had an impact in the non-agricultural sector. It caused outputs and employment in certain occupation to expand. The transport sector itself illustrated the simultaneous expansion and contraction. Railways required so many workers that by the late 19th Century it

93. Baroda State Administration Report 1919-1920

was considered the largest single employer within the modern sector of the economy. In the State, the opportunity was provided by employing large number of persons in constructing the lines. As a result the problem of unemployment was reduced. It was also true that improved transport through railways was an extravagance unsuited to India that needed to go beyond the Indian means which had entailed a financial burden on public revenue which had been met by taxation.

Railways encouraged the growth of large – scale industries. Railway made easy transport of labours, raw materials, power resources and machineries to the established industrial areas for industrial purpose. Railway played a significant role in economic transition leading to commercial evolution.

Railways helped agricultural produces to become competitive internationally and made possible an enormous expansion in the export of agricultural produces such as wheat, rices, oil seeds, cotton etc. The internal trade was promoted and pattern of foreign trade was reshaped. Railway narrowed the differences in interregional prices which always fluctuated with the change in local supply condition. It tried to equalize prices throughout the country. Railways promoted trade and commerce in the State.⁹⁴ The staple produces of Baroda district were cotton, tobacco, Mahuda flower. Large export was of raw cotton to Bombay, Large scale trade in cattle including horse, and other live stocks, sugarcane and garden produces were traded through railways. Rice, clothes machineries from Bombay, oil- grace, caster, oil seeds from Panchmahal and silk and luxurious item from Ahmedabad were chief in imported articles.

In Kadi, railway was the main mode of transport and it played an important role in the trade of commodities. There was a considerable trade in

94. Baroda State Administration Report 1919-1920

grain, oilseeds of which 3,000 tons was annually exported by railway to Baroda. Internal trade was greatly facilitated by railways in Kadi.⁻⁹⁵

The opening of the Rajpatana – Malwa State Railway and the feeder line opened by the state markedly stimulated the traffic of the district. Copper utensils, silk, cotton pottery etc. were exported to Kathiawad and Ahmedabad. The imports which used to be obtained from Ahmedabad were then received direct from Bombay by railway in Kadi.

In Navsari, Tapti Valley Railway carried on trade and railway lines like Kosamba- Zankvav, Kala Amba Railway greatly contributed in carrying on trade but reduced the importance of river ports of Navsari and Billimora.

In Amreli there was a good road system and water transport. Hence the trade was carried on by land route and water ways. Amreli – Dhari, Chaladla, Jamnagar, Dwarka, Ahmedabad, Wadhwan, Bhavnagar, Porbandar – Veraval railway lines facilitated trade. It was noticeable that export of raw cotton and import of grain in the State always remained steady while other articles fluctuated frequently and all these depended to a great degree on the nature of season in Gujarat. Owing to the great extra mixture of British and Baroda territories, it is impossible to tell exactly what proportion of goods went from those stations to British or Baroda subject. No rail borne statistics came to conclude how much trade was carried by railways or how much by other modes of transport.

Railways paved the ways for the economic transition leading to the commercial revolution in British India and Indian States. Trade was extended and revolutionized by enabling specialization of production for market. It established national and international prices for most articles of general consumption.

95. Desai, G. H., Kadi Prant P. 388

The area of the Gujarat portion of the state was 6,775 sq. miles i.e. 0.375 or about 1/267th of the total area of the whole of India. The population of that portion was 19,48,462 persons. i.e. 0.61% or 1/163 rd of the population of India which was nearly 31, 86,42,480 (1928). The total urban population of Gujarat portion of the state was 3,96,962 which constituted 1.22% or 1/82nd of the total urban population of India, including the state which was 3,24,75,276. The percentage of urban population to the total population in Gujarat portion of Baroda was 20.3 of which the corresponding percentage for India as a whole was 10.2% Baroda's percentage in respect to urban population was higher than that of any province or state and the Bombay presidency which showed a percentage of 22.9. The high figure for the Bombay presidency was due to the existence of cities like Bombay, Ahmedabad and Karachi etc in its limit. The index of general development of the state was very high, higher than that represented by the percentage of urban population of India. Modern transport system made traffic quick, easy and safe and agricultural commercially action which was the result of production of cash crops of which cultivation was more advantageous than that of the food grain. All this was due to expansion of railway and industrialization. People began to move towards urban area in large number and led to the growth of urban population of total number of towns (2,316 in 1930) in India, 48 or more than 2% were situated in the state.

The state had 34, 054 account holders in the postal saving banks in 1928. This gave a percentage of 1.6 to the total population as against 8 for India. The amount deposited gave an average of about Rs. 1.3 per head of the population against 75 for the whole of India. It indicated good financial condition of people because of economic development and industrialization as result of modern transport system especially railways. The index of general development of the state was very high.

Railway removed distance on a large scale and changed social, political, economic and cultural aspects of human life. The people had been brought together with different languages, customs, and tradition and thereby they were unified. Growth of urban areas contributed to the modernization of

society. It proves powerful and potential agent in the promotion of the material and social advancement of the people. People begun to travel by railways and mass migration of the people from one place to another place was made possible through it and resulted into intramixture of people and ultimately resulted into the rise of nationalism. Railways broke social barrier by killing germs of untouchability and social - isolation. Village self - sufficiency, feudal economy and society form of India, conservatism, orthodoxism, superstitiousness of village people by spreading the message of modernism and progressive social and scientific ideas among the Indians. "..... Many persons began to undertake long journey ... and the exchange of their views, habits, and thoughts brought about a sense of national cohesion." -96

Different cultures were brought together and cause of interprovincial cultural fellowship was promoted. Social life was changed. The western impact had been spread in each and every field of social life. In the buildings in the state the western impact can be seen in their architecture. Western models or better still modern model in social etiquette, dressing, eating - habits, dwelling units, furniture designs, better awareness about private and public hygiene, new modes of entertainment had penetrated deep into public life. Social outlook, dress, food habits, movies, styles, fashion and hair styles were penetrating in social life. Railways tended to break-up old social organization by increasing the social contact and mobility between individual classes.

Railways on one hand made the political grip of the foreign rule over India, on the other hand they were responsible for the rise and growth of nationalism. There was a national awakening in the territories of Indian states as the people of state began to come into contact with the people of the British India where nationalism was spread out. They also began to understand the exploitation of their rulers by the hands of British Government and how the interest of the states were ignored by the British under the plea of exercising the power paramountacy.

96. Sanyal N., Development of Indian Railway, p.59-61

Modern modes of transport had brought about social changes and broken traditional and customary Indian society. Emphasis on humanitarianism and rationalism was a part of westernization, which led to a series of social reform which ultimately led to the nationalist movement.

Developed modern means of transport helped in spread of education in different areas of the state. In Amerli, where His Highness' Government in spite of its being distant from the central Government of the state encouraged education of the masses. The fact cannot be denied that when primary education was introduced it was done in Amreli District which had good road system and state railways. Kala Bhavan was centre for industries and technology where students came from different and distant parts of the state and students were sent abroad for the purpose of study by His Highness' Government. Development of good transport system facilitated traveling.

One of the main express objects of rail - building was prevention of famines and the railways did succeed in mitigating the rigorous of famines. It is true that some way railway went in ironing out local surpluses and scarcities as also price variation, and soon some Indian products had domestic prices dictated by international markets. Railways helped the export of food - grains, which caused insufficiency of food supply in normal times, depleting the country of its normal surpluses and making it an easy prey to recurring famine. In Baroda state railways were constructed as measures of famine relief policy.

Railways had also helped much to increase the revenue of the Government because railways have got to share their profits with the Government. In the case of the Baroda State, income from railway revenue was so great that the state Government always took measures to safeguard its competition with land route transport.

The Baroda government invested large amount on the construction of railway lines in the state to get revenue from them. So they did not pay sufficient attention towards good road system because there was absence of

direct income from road vis a vis the railways. It was believed that the roads would adversely affect the revenue from railways. Baroda Administration Report of 1935 - 1936, 1936 - 1937 showed that Baroda Government took some measures to maintain earning from railway so for safeguarding rail borne revenue they tried to remove motor - bus competition by canceling motor-bus licenses and avoided constructing metalled roads and built only those which were feeder to railway on nearby railway stations.

Baroda State was a pioneer among the Indian states to initiate railway construction in its territories. In 1869 Ganpatrao Gaikwad had granted permission to B.B. & C.I. Rly Co. in 1856 for the construction of railways. There was a gradual expansion between 1870 and 1922. The state's investment in Railways till 1946 amounted to Rs. 5.98 crores.

The Bombay central - Surat - Baroda - Mathura broad gauge was the first railway line that started in 1860 and one of the most important broad gauge lines passing through the district constructed by the B.B. & C.I. Railway Co., soon after the completion of the survey of the areas between Bombay and Gujarat in 1853. The total length of the line in this district is 75.68 km. It has a great economic significance as it passes through Maharastra Gujarat, M.P. Rajasthan and U.P. link Baroda with Bombay and Delhi.

The construction of railways commenced in Baroda division during the year 1853-1860 and ended in 1922 served by 8 railway lines of which 2 are broad gauge and 6 are narrow gauge meter gauge in Kadi and Amreli. Baroda district is served now-a-days by 8 railway lines and serve a vast hinterland comprising Maharastra, M.P. Rajasthan, U.P. and Delhi on one hand and Saurashtra Peninsula and Kutch on the other hand. All talukas of the district with the exception Tilakwada, were served by at least a railway line. There were 93 railways stations in the district.

Total length of railway lines in the district is at present 472 km. out of it, 97 km. is broad - gauge and 375 km. is narrow - gauge. In terms of areas and population served by the railways, it can be said that there are 60.60 km. of railway line per 1,000 sq. Km. and 23.84 km. per lakh of population. The

railways feed pilgrim traffic bound for Chandod, Karnali and other holy places situated on the bank of river Narmada in this district. It helps transportation of forest produces, minerals and minerals wealth like oil, fertilizers pharmaceuticals, cotton, tobacco etc. Special railway siding are extended to GSFC and Gujarat Refinery. A large number of passenger, travel and tonnage of goods haul at each railway station in district indicate the development of transport facilities by railways. Important railways stations from the point of goods haulage are Vadodara, Dabhoi, Bodeli.