CHAPTER – VI

PERFORMANCE EVALUATION OF CHERAN TRANSPORT CORPORATION LIMITED AND IT'S COMPARISON WITH N.B.S.T.C.

Tamilnadu, a State in the Indian union, is situated in South India. It is bounded in the north by Andhra Pradesh, on the East by Bay of Bengal, on the West by Kerala and Karnataka and on the south by Indian Ocean. Tamilnadu must have made a mark in the pre-historic times by virtue of its distinct civilisation. [1] It appears to have been occupied by human settlements very early and archaeological explorations and excavations have revealed the continuity of human existence in this area since palaeolithic period. The discovery of Mesolithic tools in this region establishes the early human occupance and the traces of the Neolithic man which are found in different parts of the upland Region of Tamilnadu. [2]

Tamilnadu in the fourth Century B.C. known as Tamilagam, probably comprised the region between the vengadam in the north, cape Kumari (Comorin) in the South, and the two seas on the east and west. Thus it is evident that the present region was once a part of the then Tamilagam. The three kingdoms that dominated during the 'sangam' period (the period of the Institutes of the literary academies held in the early Hindu period before the 1st Century A.D.) were 'Chera', Chola and Pandiya'. [3] The boundaries of these kingdoms varied as their power waxed or wanted through their dynastic intrigues. [4] In addition to these three kingdoms, there were a number of feudal chiefs under them such as the Ay of Podiyil, Peham of Kannamalai, Evi of Mutharu, Nalliyakkodu of Erumainadu and Adiyaman of Kongu Nadu. [5] It is during this Sangalu Age that a brisk commercial trade with Romans is said to have flourished through the chief Ports of Chera, Chola and Pandiyan Kingdoms. [6] Relations between Tamilnadu and South East Asia probably go back far into the prehistoric period. Archaeological evidences

show the cultural impact of Tamilnadu on Cambodia, Malaya and Indo-china even during A.D. 1st and 2nd centuries.

In the beginning of A.D. fourth century the pallavas of North invaded this region and suppressed the three kingdoms. Further there was a never ending fend between the pallavas and the Gangas and the Chalukyas of North [7] which continued upto A.D. 575. The period between A.D. 300-575 is called by the historians as the "Dark epoch". [8] However, during pallava period trade and cultural exchange between Tamilnadu and South East Asia were well developed. Pallava script still has its impact over the script of S.E.Asia.

During the "Sangam" Age the region flourished both in commerce and trade. A number of settlements originated as centres of trade and administration. The above statement is also justified by the existence of Roman coins in Madurai and Ramanathapuram districts. The capitals of the various feudal kings came into existence in towns like Kalivadia (Parri Nadu), Mullur (Malai nadu) and perur (Kongu Nadu) which came into existence as the capital of the various feudal kings. There are a number of towns and villages mentioned in the Sangam literature but it is very difficult to identify them since in the sangam literature there are "more place names in the same name and often there is a conflict of the probabilities and possibilities."

During the middle Hindu period (850-1300), the temple was a centre of social life and further it became the nucleus of human settlement. Even later chera, chola and pandiya kings took more interest in the construction of temples. Throughout the upland region there were urban and rural residential or trade centres of various size. Larger towns were called as perur and the villages as Sirur; the suburban areas in cities were known as Pakkam and collection of houses as cheris [9]. Most of the places were connected by simple roads. Coimbatore, Salem, Dharmapuri, Namakkal, Tiruchengode, Kangayam, Bhavani, Rasipuram and Erode towns appear to have their origin as temple towns during A.D. 900 — 1186. [10] During vijayanagar rule, a number of forts and temples were constructed which became the nucleus of human habatations like vellore, Krishnagiri, Dindigul and Nillakkottai etc.

During the Muslim rule (1650-1800) northern and North western parts of

Tamilnadu became the centre of attraction. The Muslim rulers spent much of their time in building new towns and renovating the old ones and a number of sites such as Anwaradabath, Suliyabath, Mansubath and Abudullapuram (North Arcot) which were selected for Muslim habitations. During the later part of the period this region faced the struggle between the muslim rulers and the British. In fact, the northern part of Tamilnadu uplands and North Western Nilgiris were made a score of incessant Marches and counter marches, Advances and retreats, by the British and Mysore troops. [11] Communication lines and habitation sites were heavily damaged during the wars. The towns like Erode, Sathyamangalam and Hosur were almost deserted and ruined in 1790. Administration and the economy both were disrupted due to the impact of such wars.

The British period (1800-1947) witnessed the rise and growth of urban centres, development of transport and communications (both railway and roadway), administrative bureaucracy, adjustment in the administrative boundaries of taluks and districts, establishment of hill stations and cantonments, introduction of many educational institutions and medical facilities, irrigation and power developments (Papanasam, Pykara, Mettur Dam, etc.) and the introduction of tea and other plantation crops in the hilly region of Tamilnadu.

During 1953-56 the State of Tamilnadu, Andhra Pradesh and Kerala came into existance by readjusting the boundaries of Madras Presidency with the neighbouring regions on the linguistic basis. The capital city is Chennai. It is situated beside the bay of Bengal. The present State of Tamilnadu consists of 1,30,058 square Kilometres of area, with a population in 615.65 lakhs as on 31.3.96. [12]

Tamilnadu is full of mineral resources. Iron ores occur in several parts of Salem, Tiruchirapplli and south Arcot. The reserves in Salem district is estimated at about 300 million tonnes. Apart from this magnesite, Bouxite, Beryl, Corundum, Red garnets, Zink stone, Limestone, Mica, Limonite, Chromite, Gold, Graphite, Pyrites and Stentite are also available in the region.

The economy of this region is largely linked with agriculture, farm and its out put provides nearly all the food requirements of the Tamilnadu, raw materials

for a major portion of the industry and direct employment to 3/5th of the labour force. The dominant feature of agriculture is the predominence of food crops but in many parts of Tamilnadu are concentrated of the plantation crops (tea, coffee, coco, rubber etc.). The State of Tamilnadu is devided into 5 major crop association regions such as Rice-Oil seeds region, Rice-cotton region etc. Irrigation plays an important role in the agricultural economy of the region. The means of Irrigation are usually canels, tanks and wells. Canel and tanks are generally linked with the river systems. Well irrigation is more important in the entire Tamilnadu, Coimbatore, Karur, Dindigul and Palni taluks which are prominent under well irrigation. The high degree of development of garden cultivation is solely dependent on the wells with throughs and all the important habitations are therefore situated in such areas.

Industry on account of well organised industrial units using Modern techniques. The region is classed among the industrially better developed areas in the country. The remarkable growth of industries is mainly due to the development of power resources, particularly hydel power. Power generation untill about 1908 was confined mainly to a few tiny plants in tea estates run on water power and to the small hydro installation at kateri in the Nilgiris. The Pykara Hidro-electric scheme came into operation in 1932 with the result that the Tamilnadu entered in industrial era. In fact 76.7% of the power generation are coming from the unplaned area of Tamilnadu. And therefore, many industries has been set up in Coimbatore and other areas of Tamilnadu.

Coimbotore districts possesses 31.3% of the factories of the region, employing 55.1% of the total workers in terms of number of workers and it is closely followed by Madurai and Tirunelveli. The main large scale industries are textiles, enginnering, food industries, chemicals and agricultural processing. Textiles are by far the most important agrobased industry and the State ranks third in the country regarding the number of textile Mills. Among the southern states of India, this state employs quite a high percentage of Industrial workers in textiles. More than 50% of the workers of Coimbatore district are employed in textile industries. The rapid growth of towns like coimbatore, Tiruppur, Madurai and Ambasamudram is partly due to the presence of well established textile industries. Regarding

Engineering industry, Coimbatore city stands first in manufacturing units, followed by Dindigul and salem. Madukkarai is important for its cement industry. There are plantation industries like coffee, tea, cinchona, cardamom in the districts of Coimbatore, Nilgiris, Salem and Madurai. Many industrial complex have been developed in Ootacamund and Coonoor taluks. An iron and steel plants have been set up in Salem and this area has been developed as an industrial area. The Government has developed a number of industrial estates in places like Mettupalayam, Coimbatore etc. Among the small scale industries cotton textile employs the largest numbers of workers, followed by food processing, printing and light engineering industries. Even among the small scale Industries Coimbatore and Salem districts appear to have the largest concentration. Among the cottage industries, mainly oriented to consumer goods, spinning and weaving are of primary importance along with mat and basket weaving, cerpentary, blacksmithy, faberication of metal articles and bidi-making. Handlooms, which form roughly a fifth of the total in India are centred in Coimbatore, Salem, North Arcot, Ramanathapuram and Tirunelveli districts. And in many places of Tamilnadu are involved in carpet weaving, tanning and basket making, coir and coirmat making.

In Tamilnadu Transport plays an important role for the overall development of this region. The capital city Chennai is connected with all other important parts of India and it is also connected by air, road and railway routes. It is interesting to observe that on account of the discontinuous Tamilnadu hills on the east, the routes from the northern upland region to the eastern sea-board follow either the valleys or gaps between these hill ranges. All districts head quarters are connected with the rail and road ways. Coimbatore is the only city having air links with Chennai, Madurai, Cochin and Tiruchehirappalli. It is the Manchester of South India owing to concentration of cotton textile mills.

The economy of Tamilnadu is not an island into itself, docked as it is into the mainstream of the national economy. In the year 1980's, if we compare with the nation as a whole, the State of Tamilnadu had a structuraly clear economy. The structural charge has always been considered as a mark of economic development. There are various places for high employment potential such as Market, Transport,

Education, Housing and Public health etc. Among them transport has great potential for employment generation.

In Tamilnadu, at present 20 nationalised passenger bus services are playing their buses throughout Tamilnadu and other states. The fleet strength has been also increased from 7080 in 1980-81 to 14,144 in 1994-95 registering on increase of 200% passenger bus service in Tamilnadu which has established more workshops/ depots in different transport operetional areas as both in Tamilnadu and in the neighbouring states of Andhra Pradesh, Karnataka, Kerala and Pondicherry. Among these corporation cheran Transport Corporation Limited is one of them and it is headed by the director, State Transport and constitutes an integral part of the Ministry of Transport. The origin of Cheran Transport Corporation Ltd. goes back to 1947, after independence it first started its functioning and the organisation has been steadily growing ever since. The growth of Cheran Transport Corporation Ltd. continued manifold during the period of the study (1980-81 to 1997-98); there are 4 divisions controlling 18 deports, with a total fleet of 989 buses covering a total of 1526.83 lakh schedule kilometres per annum.

In Tamilnadu transport Corporation are developed (under company's Act). The existence of so many transport companies in one state create problems in respect of over lapping in operation and infrastructure and co-ordination is also a major problem in Tamilnadu. The first 25 years period between 1947 and 1972 shows the gradual implementation of the nationalisation policy of the Tamilnadu Government in road passenger transport service despite which the Government faces various problems, such as many small-private bus operators start their functions and the fading out of the big bus owners. From 1972 to 1995 signifies the formation of different State Transport Corporation based on geographical divisions for effective and better public passenger transport service not only for the people of Tamilnadu but also for the people of neighbouring states.

The Head quarter of Cheran TCL is established in Coimbatore of Tamilnadu. The city of Coimbatore is a growing industrial and commercial centre, with about 200 textile mills and engineering units and large number of educational and commercial Institutions.. The city has registered largest number of Motor Vehiclrs

after Chennai city. It also situated on the border of Kerala and connected with rest of the country through the National Highway 47 . Fortunately, Cheran TCL is the sole state Transport company for transporting people from one place to another place in this city.

In Coimbatore, the State Highways, Municipal or Corporation Roads exists side by side beside the National Highway 47. The connection road of Coimbatore city are mainly maintained by the town Panchayats. The state Highways, Municipal or Corporation roads are not maintained than National Highways in respect of road conditions.

The main business area of Coimbatore known as palaya (old) market, is central around the former fort, one of the nucleus of the city. Due to increase in the volume of traffic, shopping centres have started coming up along the main highways.Some secondary shopping centres have also emerged in the newly established residential and industrial colonies. The administrative units, which were centred around the Fort area during the early part of the British rule, have been shifted to the coast of the Railway line, in the vicinity of the Race course. Industrial areas have developed along both sides of Railway line i. e. in middle part of the Coimbatore city. The absence of industries in the west may be due to the existance of tanks. The low & middle class residential houses are clustered in the fort area (Kothaimedu) and pettai area. During the British period the area to the east of Railway line was selected for rather the best residential colony due to its central situation between the trank roads to Chennai & Tiruchehirappalli and in the railway station area. The industrial encroachment in the east and the existance of tanks in the south & west have caused the growth of residential colonies in north of the Coimbatore city along the main road to Ootacamund.

The tremendous increase in infrastructural facilities after nationalisation reflects that Tamilnadu is one of the leading states of India where the development of Road transport has received the priority. All the villages of the state have been provided with link roads, and bus service has been provided on all the routes by increasing mobility of men and materials. Cheran Transport Corporation Limited has not only helped in opening up remote and backward areas of the state, but also played a

catalistic role in stimulating socio economic changes which have hastened the pace of economic growth of Coimbatore as well as Tamilnadu State.

Cheran T. C. L. is an important source of revenue to the State. It is known as one of the most efficiently run transport undertaking owned by any state Government in the country. The impressive efficiency with which it is being run as served as the necessary basis of selecting the undertaking for comparative study.

Cheran T. C. L. is a Government company, & is established according to 617 of the Indian Companies Act. It has 51 percent of the shares which are held by the State Government. Apart from the fact that such companies are governed by the Indian Companies Act. There is provision for equity share capital and preference share capital in the case of Cheran T. C. L. The Cheran T. C. L. generally will have to observe norms prescribed by the Reserve Bank of India in respect of debt / equity ratio. The company can also receive fixed deposit from the public.

Cheran T. C. L. is designed mainly for organisation whose main purpose is to carry on business for profit. The board of directors of the company have a free hand for taking a decision in respect of policy making because the profit motive dominates the social responsibility. The board of directors of the company are mainly professional persons.

Organisational Structure :

Broadly, there is a three tier management system. The first tier is the head office, the second tier is the Divisional Offices and the third, the depot level.

Head Office :

Cheran TCL is headed by the Director, located at the Head Office at Coimbatore. He is assisted by the officers in the Directorate.

Divisional Offices :

The Divisional Offices represent the second-tier of the administration. The divisional offices are located at 4 different places of Coimbatore. Every Divisional Officer has been provided with a number of officers who assist him in exercising proper supervision and control over the operation, inventory, store purchase etc.

The post of Divisional Officers are mainly professional personnel.

Depot Level :

The third-tier in the set up is the depot level. It is under the charge and control of the Divisional Offices. During the year 1996-97 there were 18 depots of Cheran TCL

To carry out the Minor/Major repairs two central workshops are functioning in the Cheran TCL. The highly professional personnel is head of the office of the central workshop and they are assisted along the service Engineer.

Performance Appraisal :

There are two kinds of appraisal can be attempted in the case of Road Passenger Transport Undertaking.

(i) Operational perormance.

(ii) Financial Performance.

The object of this chapter is to compare the performance of NBSTC with Cheran TCL Cheran TCL ply their buses in plain areas of Tamilnadu and ajoining states. NBSTC also ply their buses in plain areas of West Bengal and adjoining state. Tamilnadu is industrially and agriculturally developed. NBSTC is in corporation Form where as Cheran TCL is in Company Form. Cheran TCL is a profit making organisation (Before Tax) during the study period. NBSTC provides its services in eastern zone whereas Cheran TCL provides its services in southern zone of India. Considering all these points the comparison is made to locate the weak areas of NBSTC with reference to the said organisation.

Comparative performance evaluation of Cheran TCL and North Bengal State Transport Corporation.

The physical and financial performance of Cheran TCL has been evaluated in this chapter and the performance of North Bengal state Transport Corporation been evaluated in Chapter four on the basis of data. It will be proper and analytically useful if we compare Cheran TCL with the North Bengal State Transport Corporation, because both undertakings run their buses in plain areas. So in this

chapter we shall compare with each other on the basis of following parametres.

(a) Efficiency trends in terms of physical parametres.

(b) Efficiency trends in terms of financial parametres.

(a) Efficiency trends in terms of physical parameters.

i. Bus-Staff Ratio.

It is one of the criteria for measuring the physical performance of state Transport undertakings. Table 6.1 shows that Cheran T. C. L. performnce in case of staff-bus ratio is good in compare with the NBSTC. and it has utilised less staff per bus during the study period 1980-81 to 1997-98. Staff-Bus ratio has exibited almost constant in Cheran T. C. L. up to 1992-93, but after that, it has been higher up to the end of the study period, whereas in case of NBSTC it has been higher in compare with Cheran T. C. L. and almost constant though it has been able to reduce staff- bus ratio in some year during the study period. So this shows that NBSTC has been spending more on its staff but Cheran T. C. L. is spending less on its staff, though both undertakings are identical. When we will compare with all India average eight person employees per bus and then Cheran T. C. L. has been able to achieve referred target but NBSTC has not been able to achieve referred targets. The all India average eight person per bus has been referred in the earlier chapter.

Table - 6.1

Staff-Bus Ratio in Cheran T. C. L. and NBSTC.

Year	Cheran T. C. L.	N. B. S. T. C.
1980 - 81	7.36	14.2
1981 - 82	N. A.	15.0
1982 - 83	7.18	14.2
1983 - 84	N. A.	15.7
1984 - 85	7.44	16.4
1985 - 86	7.04	12.00

Table contd. next page

Table 6.1 Contd.

1986 - 87	7.33	12.00
1987 - 88	7.04	10.80
1988 - 89	N. A.	N. A.
1989 - 90	7.28	8.35
1990 - 91	7.35	8.01
1991 - 92	7.35	8.80
1992 - 93	7.35	8.93
1993 - 94	6.67	9.05
1994 - 95	8.72	8.93
1995 - 96	8.77	10.30
1996 - 97	8.46	11.04
1997 - 98	8.15	10.87

Source : Calculated.

[The all India average in the case of Staff-Bus ratio is 8 person per bus. As has been calculated by the CIRT (Research and Training), Pune, India.]

However, staff bus ratio is deceptive, and does not exibit the actual position. A better index is staff used per 100 kilometres of operation, which is shown in table 6.2. The second parameter used, that is, staff employed per 100 kilometres of operation, points out that Cheran TCL has performed much better than NBSTC. In the case of Cheran TCL, beginning with the year 1993-94, staff employed per 100 kilometres of operation has been less than 2, exactly equal to 1.97 in the year 1996-97, while in the case of NBSTC it has never been less than two and has been as high as 8.20 during 1984-85 and 3.42 during 1993-94. Thus Cheran TCL has consistently been using less staff and hence has been more economical. Thus, it is clear from the table that during the whole study period, the difference between Cheran TCL and NBSTC has been higher i.e., the latter is using more persons per 100 kilometres of operation and is thus less efficient. If we assure equal wages per worker, it suggests higher labour productivity in Cheran TCL.

Table : 6.2

Staff Employed per 100 kms. of operation per day in Cheran T.C.L. and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	2.52	6.45
1981 - 82	N.A.	7.14
1982 - 83	2.20	6.40
1983 - 84	N.A.	7.13
1984 - 85	2.51	8.20
1985 - 86	2.31	7.36
1986 - 87	2.52	5.74
1987 - 88	2.41	5.16
1988 - 89	N.A.	N.A.
1989 - 90	2.40	3.28
1990 - 91	2.33	3.28
1991 - 92	2.37	2.12
1992 - 93	2.23	3.64
1993 - 94	1.82	3.42
1994 - 95	2.08	3.36
1995 - 96	2.01	3.84
1996 - 97	1.97	4.07
1997 - 98	1.89	4.11

Source : Calculated.

[The all India average in respect of staff employed per 100 kms. of operation is 2. As has been calculated by the CIRT (Research and Training), Pune, India.

ii) Fleet Utilisation :

It is also one of the criteria for measuring the physical performance of a State Transport undertaking. It is the percentage of buses on road to the buses held. Table 6.3 is an indicator of the comparative picture of both undertakings one is company form of organisation and another is corporation form of organisation,

in terms of percentage of buses on the road. Cheran TCL has increased its performance from 94 percent buses in use during 1980-81 to 99.6 percent during 1997-98, the lowest being 87.3 percent during 1983-84, compared to all India average of 85 to 90 percent which is referred in the earlier chapter. However, NBSTC has a very poor performance and much below the all India average of 85-90 percent. Therefore, on this account, Cheran TCL has performed better than NBSTC.

Table - 6.3

Number of Buses on Road in Cheran TCL and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	94.0	68.0
1981 - 82	N.A.	64.0
1982 - 83	90.0	57.0
1983 - 84	87.3	59.0
1984 - 85	90.3	55.3
1985 - 86	91.0	85.0
1986 - 87	92.5	86.0
1987 - 88	96.0	N.A.
1988 - 89	N.A.	N.A.
1989 - 90	95.7	93.4
1990 - 91	95.8	90.9
1991 - 92	96.1	88.2
1992 - 93	99.4	81.4
1993 - 94	96.9	78.2
1994 - 95	99.1	78.8
1995 - 96	99.1	97.4
1996 - 97	99.1	67.4
1997 - 98	99.6	66.3

Source : Annual Administrative Reports of Cheran T.C.L. and NBSTC from 1980-81 to 1997-98.

[All India average in the case of fleet utilisation is 90 percent. As has been calculated by the CIRT, Pune, India.]

iii) Consumption of Diesel, Lubricants and oils.

To judge the efficiency or physical performance of Cheran TCL and NBSTC, another parameter used is kilometers obtained per litre of oil. Table 6.4 shows the comparative performance in respect of comsumption of Diesel, Lubricants and oils Low consumption of oil indicates an economy in fuel consumption, higher efficiency/ productively and better performance. Cheran TCL has been showing better efficiency through out the period viz. 1980-81 to 1997-98 except during 1986-87 to 1990-91.

The performance of NBSTC in terms of kilometres obtained per litre of oil has not been quite consistant, it was 3.70 during the year 1980-81 and 3.89 in the year 1996-97. It has been the maximum during 1981-82 and 1989-90 i.e. 4.00. During the last four years, it has been 3.90 to 3.88 KMPL (HSD). But in the case of Cheran TCL has achieved nearest 4 and above 4 from 1980-81. It is very good. But in the case of NBSTC, it has not been able to achieve 4 kilometre in most of the year during the study period. However, when we compare with Cheran TCL, it does not look efficient. Cheran TCL has achieved 4 and above and has been remain constant during the last six years. Therefore, on this account, Cheran TCL has performed better than NBSTC.

Table - 6.4

Kilometres obtained per Litre of oil in Cheran TCL. and NBSTC.		
Year	Cheran TCL.	NBSTC.
1980 - 81	4.01	3.70
1981 - 82	N. A.	3.60
1982 - 83	3.70	3.60
1983 - 84	3.66	3.50
1984 - 85	3.72	3.60
1985 - 86	3.81	3.70

Table contd. next page

Table 6.4 Contd.

1986 - 87	3.81	3.85
1987 - 88	3.81	4.00
1988 - 89	N. A.	N. A.
1989 - 90	3.82	4.00
1990 - 91	3.79	3.97
1991 - 92	3.98	3.79
1992 - 93	4.03	3.70
1993 - 94	4.03	3.75
1994 - 95	4.22	3.91
1995 - 96	4.23	3.90
1996 - 97	4.18	3.89
1997 - 98	4.24	3.88

Source : Annual Administrative Reports of Cheran TCL. and NBSTC from 1980-81 to 1997-98.

[All India average in respect of KMPL (HSD) is 4.48. As has been calculated by the CIRT, Pune, India.]

(iv) Breakdowns :

It is one of the criteria for measuring the physical performance of state Transport undertaking during a given period of time and the relationship between the number of breakdowns and operational efficiency appears to be inverse. Table 6.5 exibits that Cheran TCL has an impressive record of avoiding breakdowns, starting with less than one breakdowns per 10,000 kilometres and coming down to almost zero in 1997-98. However, NBSTC in comparison to Cheran TCL is in a bad shape. It was starting with 1.41 breakdowns per 10,000 kilometres and increase to 2.17 in 1997-98. So, Cheran TCL has been more efficient than NBSTC. It was 0.32 during the year 1980-81, then fell to 0.09 in 1997-98. But it was almost 0.40 during 1982-83 to 1984-85. So it is clear from the table that the declining growth rules in the case of Cheran TCL is more than NBSTC. This confirms the hypothesis that the lower the breakdowns, the higher the efficiency of the undertaking. By this hypothesis, Cheran TCL has performed better than NBSTC. Table also shows that the number of brekdowns has been higher in the case of

NBSTC than that of Cheran TCL. Therefore, even on this parameter, Cheran TCL has been more efficient than NBSTC.

Table - 6.5

Breakdowns per 10,000 kms. Run in Cheran TCL and NBSTC.

Year	Cheran TCL	NBSTC
1980 - 81	0.32	1.49
1981 - 82	N. A.	1.40
1982 - 83	0.40	1.50
1983 - 84	0.40	1.50
1984 - 85	0.41	1.60
1985 - 86	0.30	1.50
1986 - 87	0.16	1.50
1987 - 88	0.11	1.50
1988 - 89	N. A.	N. A.
1989 - 90	0.12	N. A.
1990 - 91	0.12	1.80
1991 - 92	0.27	2.02
1992 - 93	0.23	2.03
1993 - 94	0.22	2.37
1994 - 95	0.15	N. A.
1995 - 96	0.11	N. A.
1996 - 97	0.15	2.17
1997 - 98	0.09	2.17

Source : Statistical abstract of cheran TCL and NBSTC from 1980-81 to 1997-98

[The all India average is 0.65 in the case of breakdowns. As has been calculated by the CIRT (Research and Training), Pune, India.

v) Accident :

It is also one of the indicator for measuring the efficiency of STU's. It is the number of accidents involving the fleet of an undertaking during a given period of

time. The relationship between efficiency and accidents is inverse. Table 6.6 is a pointer to the comparative position of both Cheran TCL and NBSTC. The table shows that, throughout the study period from 1980-81 to 1997-98, the performance of NBSTC has been far better than that of Cheran TCL. However, after 1990-91, Cheran TCL has been able to reduce accidents per lakh kilometres to a considerable extent during the study period. As a result, from 1994-95 onwards both Cheran TCL and NBSTC have been able to reduce the accidents per lakh kilometres to 0.30, i.e. 1994-95 onwards both undertakings have come down up to 1996-97. But during the end of the study period the rate of accident is increased by both undertakings.

Table : 6.6

Accident per Lakh Kilometres in Cheran TCL and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	0.58	0.23
1981 - 82	N.A.	0.24
1982 - 83	0.60	0.20
1983 - 84	0.55	0.20
1984 - 85	0.61	0.21
1985 - 86	0.32	0.21
1986 - 87	0.40	0.19
1987 - 88	0.50	0.27
1988 - 89	N.A.	N.A.
1989 - 90	0.42	0.16
1990 - 91	0.46	0.15
1991 - 92	0.33	0.11
1992 - 93	0.30	0.14
1993 - 94	0.30	0.19
1994 - 95	0.34	0.28
1995 - 96	0.28	0.16
1996 - 97	0.32	0.13
1997 - 98	0.67	0.19

Source : Stitistical abstruct of Cheran TCL and NBSTC from 1980 - 81 to 1997 - 98.

[The all India average is 0.33. As has been calculated by the CIRT, Pune, India.]

vi) Vehicle Utilisation :

This is also one of the criteria for measuring the physical performance of State Transport undertakings. Table 6.7 shows the comparative analysis of vehicle utilisation of Cheran TCL and NBSTC.

Vehicle utilisation means the assets utilisation expressed as the volume of operation in terms of kilometres operated.

The table 6.7 clearly shows that in bus utilisation per day (kms) on road, Cheran TCL has done better than NBSTC over time. Compairing the performance of NBSTC with that of Cheran TCL, as shown in the table 6.7, one finds that NBSTC has not been able to improve its performance/efficiency over time, it is no match with Cheran TCL. In the case of NBSTC it was 220.00 in the year 1980-81 and end of the study period was 429.5 in the year 1997-98. In the case of NBSTC, average vehicle utilisation per day is 230 (km) on road, while in the case of Cheran TCL it is 350 Km. per bus per day on road. Thus Cheran TCL has done better than NBSTC. So, both these undertakings should give attention for better performance on bus utilisation per day (Kms) on road.

Table : 6.7

Performance of Cheran TCL and NBSTC in respect of vehicle utilisation per day on road in terms of kilometres.

Year	Cheran TCL	NBSTC
1980 - 81	291.33	220.0
1981 - 82	N.A.	210.0
1982 - 83	325.50	215.9
1983 - 84	301.00	220.0

Table contd. next page

Table 6.7 Contd.

1984 - 85	286.91	200.0
1985 - 86	303.50	163.0
1986 - 87	290.00	209.0
1987 - 88	291.80	209.0
1988 - 89	N.A.	N.A.
1989 - 90	303.10	254.2
1990 - 91	314.50	243.7
1991 - 92	308.90	246.8
1992 - 93	329.10	144.8
1993 - 94	364.50	264.1
1994 - 95	419.20	165.7
1995 - 96	435.20	267.7
1996 - 97	427.70	271.2
1997 - 98	429.50	264.0

Source : Calculated

[The all India average is 307.7 per day on road (Kms). As has been calculated by the CIRT, Pune, India.]

vii) Passenger carried :

It is also one of the criteria for measuring the physical performance of State Transport undertakings. Table 6.8 shows the comparative analysis of two undertakings. From the table it is clear that NBSTC has been able to carry 400 passengers per bus per day from 1980-81 to 1987-88 and again from 1993-94 to 1997-98, except in the year 1989-90, 1991-92 and 1992-93. In the year 1980-81, the total passenger carried per bus per day was 446 and at the end of the period it was 450 in the year 1997-98, while in the case of Cheran TCL, it has been done quite good in terms of the passenger carried by them. During the year 1980-81, passenger carried per bus per day in the case of Cheran TCL was 726 and in the year 1997-98 was 1612. Thus it is clear from the table 5.28 that Cheran TCL had carried more passengers in their buses than that of NBSTC. So on this account also, Cheran TCL has done better than NBSTC.

We may say to conclude that the Cheran TCL has done more better than NBSTC after discussing the efficiency trends with the aid of six parameters. The planning commission opines that the better management helps to perform this. Above all, the right assessment of additional traffic demand helps to improve the operational efficiency.

Table - 6.8

Passenger carried per Bus per Day in Cheran TCL and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	762	446
1981 - 82	N.A.	365
1982 - 83	980	547
1983 - 84	1065	611
1984 - 85	1077	686
1985 - 86	1064	815
1986 - 87	992	671
1987 - 88	999	643
1988 - 89	N.A.	N.A.
1989 - 90	1114	200
1990 - 91	1258	200
1991 - 92	1173	253
1992 - 93	1189	365
1993 - 94	1367	410
1994 - 95	1642	424
1995 - 96	1697	488
1996 - 97	1697	493
1997 - 98	1612	450

Source : Calculated.

[All India average is 650 for passenger carried per bus per day. As has been calculated by the CIRT, Pune, India.]

b) Efficiency Trends in terms of Financial parameters :

With the help of following variables, the financial performance of State Transport undertakings can be measured . These are :

i) Growth of total revenue per effective kilometre.

ii) Toatl expenditure/cost per effective kilometre.

iii) Net profit/loss per kilometre.

iv) Impact of Taxation.

v) Return on Investment.

i) Growth of total revenue per effective kilometre :

State Transport undertakings mainly collected revenues or income through the selling of passenger tickets or luggage fair from the passengers travelling in their buses. Table 6.9 shows the growth of Total Revenue per effective kilometre of both undertakings. The performance of NBSTC is not quite comparable with that of Cheran TCL. From the begining of the study period i.e. from 1980-81, onwards the difference has increased in favour of Cheran TCL. The revenue per kilometre has been on the increase for North Bengal State Transport undertaking during the period 1980-81 to 1993-94, but after that the revenue per kilometre has been on the decrease during the end of the study period from 1994-95 to 1997-98, while in the case of Cheran TCL, the Revenue per kilometre has been on the increase during the period 1980-81 to 1997-98. In absolute terms, Cheran TCL has earned 977.6 paise per kilometre as compared to 693.5 paise per kilometre of NBSTC during 1997-98. The compound growth rates in the case of NBSTC and Cheran TCL have been 1.46 and 20.18 percent per annum respectively. Thus in the case of Cheran TCL, revenue per effective kilometre has increased more than NBSTC during the study period.

Table - 6.9

Growth of Total Revenue per EKM in Cheran TCL and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	281.0	209.0
1981 - 82	N.A.	203.0
1982 - 83	332.0	209.0
1983 - 84	363.0	237.0
1984 - 85	375.0	251.0
1985 - 86	417.0	280.0
1986 - 87	415.0	289.0
1987 - 88	448.7	313.0
1988 - 89	N.A.	N.A.
1989 - 90	493.3	N.A.
1990 - 91	570.9	498.6
1991 - 92	605.7	551.3
1992 - 93	638.7	603.7
1993 - 94	727.2	703.8
1994 - 95	767.1	585.7
1995 - 96	789.7	637.5
1996 - 97	818.4	683.5
1997 - 98	977.6	693.5

Source : Calculated.

[The all India aveaage is 1026 per EKM. As has been calculated by the CIRT. Pune, India]

ii) Total Expenditure/cost per effective KLM.:

It is one of the criteria for measuring the Financial performance of State Transport undertakings. Table 6.10 shows the relative performance of Total expenditure/cost per effective kms. of both undertakings. Expenditure or cost means the cost of operation or providing services to the passengers per effective

kilometre. Table 6.10 clearly indicates that, from the beginning of 1980-81 to the end of the study period 1997-98, NBSTC has been incurring higher cost per kilometre, except in the year 1990-91. It is also noticed from the table that though the total expenditure/ cost per effective km. of Cheran TCL has been increased but that is not more than NBSTC. The cost is more than NBSTC only in the year 1990-91, but from the next year to the end of the study period (1997-98), the cost of NBSTC is increased in each year. The cost of Cheran TCL has been increased due to the higher incidence of taxes.

In the case of NBSTC, the cause of higher cost is due to the excess staff per vehicle, high maintenance cost, bad road conditions, pressure of loan etc.

Thus in terms of both, i.e. the revenue and cost, Cheran TCL has performed better than NBSTC.

Table - 6.10

Toatl Expenditure/cost per EKM in Cheran TCL and NBSTC

Year	Cheran TCl	NBSTC
1980 -81	281.0	385.0
1981 - 82	N.A.	447.0
1982 - 83	331.0	486.0
1983 - 84	355.0	N.A.
1984 - 85	365.0	469.0
1985 - 86	417.0	522.0
1986 - 87	414.0	440.0
1987 - 88	460.4	543.0
1988 - 89	N.A.	N.A.
1989 - 90	493.3	N.A.
1990 - 91	585.2	562.5
1991 - 92	617.2	638.1
1992 - 93	698.7	773.1
1993 - 94	738.9	818.4

Table contd. next page

Table 6.10 Contd.

1994 - 95	752.9	896.5
1995 - 96	848.9	1080.0
1996 - 97	889.4	1247.4
1997 - 98	973.9	1313.2

Source : Calculated

[The all India average for cost per EKM is 1139.8 paisa. As has been calculated by the CIRT, Pune, India.]

iii) Profitability :

The net profits of State Transport undertakings is the difference between revenue per Km. and cost per km.

The net profit per kilometre is the difference between revenue per kilometre and cost per kilometre which includes interest of payment, depriciation and taxes.

Table 6.11 makes it manifest that the Cheran TCL has made profits in 18 years of its operation during the period under study i.e. during 1980-81 to 1997-98, while NBSTC has suffered losses for whole of the period under study. This implies that over a span of 18 years, Cheran TCL has earned profits (Before Tax) in 18 years. NBSTC has been suffering continuous losses since 1980-81 and the loss has been moving upward in every year. It has reached a disturbing figure of 619.40 paise per kilometre during 1997-98 as compared to Cheran TCL. Cheran TCL has been showing profits from 1980-81 to 1997-98 and during 1994-95 it has earned profit of 90.40 paise per kilometre. Cheran TCL also has been one of the very few undertaking to have earned a net profit in our country.

Table - 6.11

Net profit/loss (Before tax) per Effective km. of operation in Cheran TCL and NBSTC.

Year	Cheran TCL	NBSTC
1980 - 81	46.0	(-) 179.7

Table contd. next page

Table 6.11 Contd.

1981 - 82	N.A.	(–) 230.0
1982 - 83	52.0	(–) 275.0
1983 - 84	55.0	N.A.
1984 - 85	56.0	(–) 115.0
1985 - 86	70.0	(–) 241.7
1986 - 87	52.0	(–) 150.2
1987 - 88	43.8	(–) 229.5
1988 - 89	N.A.	N.A.
1989 - 90	54.1	(–) 55.0
1990 - 91	50.8	(–) 62.0
1991 - 92	56.0	(–) 86.2
1992 - 93	15.0	(–) 167.7
1993 - 94	63.4	(–) 113.8
1994 - 95	90.4	(–) 310.5
1995 - 96	14.6	(–) 442.9
1996 - 97	3.0	(–) 563.4
1997 - 98	64.0	(–) 619.4

Source : Profile and performances of STU's, from 1980-81 to 1997-98, published by CIRT, Pune.

[The all India average in respect of net profit/loss (Before Tax) per effective km. (Paise) is 5.8. As has been calculated by the CIRT, Pune, India.]

iv) Impact of Taxation :

Today most of the State Transport undertakings are incurring losses day by day. There are various reasons for those losses. Among them taxation is one of them. The rates of various taxes levied by the Government of Tamilnadu on these undertakings from time to time have been high as compared to the tax rates applicable in some undertaking of other States as is shown in table 6.12. The table indicates that Cheran TCL has the incidence of taxation, i.e. 75.0 paise per kilometre. Where as the NBSTC having 0.3 paise per kilometre. So the table clearly shows that Cheran TCL's position is higher than NBSTC in respect of tax rate. Thus, it is

clear, that the incidence of taxation is high in the case of Cheran TCL than NBSTC. Taxes paid per bus per year could be another basis for comparison. Again, Table 6.12 shows that Cheran TCL has paid more tax for per bus held per year than NBSTC. Though there are many undertakings who paid more tax for per bus held per year than Cheran TCL and NBSTC. Hence, there is a need for reviewing the tax structure in relation to transport so as to make it more relevant to the present times.

One thing is also very much clear after analysing the impact of taxation that though the Cheran TCL has paid more tax for their buses than NBSTC but they are not incurring losses year after year like NBSTC, so, we can draw the conclusion that the performance/efficiency of Cheran TCL is better than NBSTC.

Table - 6.12

Incidence of Taxation in STU's 1997-98

Sl. No.	Undertakings	Total taxes pkm. (Paise)	Total tax per bus held per year (Rs)
	(1)	(2)	(3)
1.	Maharashtra SRTC	178.8	1,64,312
2.	Andhra Pradesh SRTC	143.9	1,63,531
3.	Karnataka SRTC	66.8	69,948
4.	Gujrat SRTC	139.3	1,52,700
5.	U. P. SRTC	50.0	39,660
6.	Kerala SRTC	21.0	20,389
7.	S. T, Haryana	307.1	3,28,249
8.	Rajasthan SRTC	147.4	1,50,213
9.	M. P. SRTC	219.5	1,66,955
10.	S. T. Punjab	305.0	2,45,758
11.	Bihar SRTC	95.3	5,612
12.	Pepsu RTC	316.5	2,88,112

Table contd. next page

Table 6.12 Contd.

13.	Anna TCL	73.0	1,11,791
14.	Jeeva TCL	72.0	1,12,934
15.	Cheran TCL	75.0	1,03,319
16.	NBSTC	0.3	208
17.	SLM-I	73.0	1,07,529
18.	NPM-I	73.0	1,11,791
19.	CBE- II	70.0	1.07.000

Source : Combiled from Performance statistics of STU's 1997-98, published by CIRT, Pune.

[In the case of Cheran TCL, total taxes per km. (paise) and total tax per bus held per year (Rs.) is high in compare with NBSTC This is observed in performance statistics, published by CIRT, Pune. (Date- 31.3.98.) P. 101, 102, and 103.]

(V) Return on Investment :

It is also one of the criteria for measuring the financial performance of State Transport undertakings.

Cheran TCL has performed much more better than NBSTC even on the rate of return criteria Table 6.13 spot lights that Cheran TCL has earned positive return on investment i. e. 52.78 percent during 1997-98 while NBSTC has shown a consistant negative return on investment i. e. 293.96 percent during 1997-98.

Table - 6.13

Return On Investment for Cheran TCL and NBSTC

Year	Cheran TCL	NBSTC
1980 - 81	97.2054	-122.0584
1981 - 82	N. A.	-91.0259
1982 - 83	148.0824	-99.7304
1983 - 84	145.8144	N. A.
1984 - 85	111.8838	-168.0812

Table contd. next page

Table 6.13 Contd.

1985 - 86	140.4150	-161.4038
1986 - 87	122.8644	-162.1648
1987 - 88	148.3548	156.0384
1988 - 89	N. A.	N. A.
1989 - 90	177.2357	N. A.
1990 - 91	178.1682	7.7769
1991 - 92	166.3814	4.9826
1992 - 93	114.4297	N. A.
1993 - 94	175.3958	N. A.
1994 - 95	171.4973	N. A.
1995 - 96	75.6134	-226.9071
1996 - 97	60.4154	-268.4785
1997 - 98	52.7857	-293.9681

Source : Calculated.

[Negative ROI (percent) means lower the financial performance and positive ROI (percent) means better the financialperformance. It is recommended by the Government of India, Report on the performance of State Transport undertakings, Planning Commission, New Delhi, 1981, p.79]

SUMMARY

The object of this chapter is to compare the performance of Cheran TCL and NBSTC. The objectives of Cheran TCL is economy in service and run the organisation with profit. In this regard, the analysis of operational and financial efficiency is required. The physical performance and Financial performance of Cheran TCL and NBSTC can be measured. The performance of NBSTC has been analysed in chapter four on the basis of data. Since both the Transport undertakings ply their buses in plain areas of Tamilnadu and adjoining areas and West Bengal and adjoining areas. Tamilnadu is industrially and agriculturally developed. Cheran TCL is company Form whereas NBSTC is corporation Form . Cheran TCL run with profit (Before Tax) during the study period. Considering all these points it is relevant to compare the performance of Cheran TCL and NBSTC

to locate the weak areas of NBSTC. So we have compared the performance of Cheran TCL and NBSTC in terms of the following two parameters.

1)Efficiency trends in terms of Physical parameters.
2)Efficiency trends in terms of Financial parameters.

1) Efficiency trends in terms of Physical Parameters :

i) Bus-Staff Ratio :

Table 6.1 shows the Bus- Staff ratio of Cheran TCL and NBSTC. The table clearly reveals that it is constantly in favour of Cheran TCL. It has utilised less bus-staff ratio during the study period. The trend of bus-staff ratio in the case of Cheran TCL is more or less stable but in the case of NBSTC, the ratio is higher and almost constant. During the year 1980-81, it is 7.36 in the case of Cheran TCL, while it is 14.2 in the case of NBSTC. Again it is 8.15 at the end of the study period (1997-98) in the case of Cheran TCl, while, it is 10.87 in the case of NBSTC. So it is clear that, NBSTC is spending more for its staff but Cheran TCL is spending less for its staff. Though the both undertaking is identical. All India average is 8 person per bus, and in this way Cheran TCL has been able to achieve the referred target but NBSTC has not been able to achieve referred target, which is stated in earlier chapter.

ii) Staff Employed per 100 kms. of operation per day in Cheran TCL and NBSTC:

Table 6.2 clearly reveals that Cheran TCL has performed better than NBSTC during the study period. Sometime bus-staff ratio does not exibit the true picture, but the above criteria is a better index for measuring the efficiency of STU's. In the case of Cheran TCL, staff employed per 100 km. of operation per day is less than two and three. But in the case of NBSTC, it is more than three per day in 100 km. of operation. Therefore, we can say that Cheran TCL is more efficient than NBSTC.

iii) Fleet Utilisation :

Table 6.3 highlights that Cheran TCL has increased its performance from 94 percent to 99.1 percent buses in use on the road during the study period. But in the case of NBSTC, it was 68 percent in the year 1980-81 and at the end of the study

period it was 66.3 percent. Though the all India average is 88-89 percent, which is referred in earlier chapter. In this respect Cheran TCL has achieved the referred target but NBSTC not, though both undertaking is identical.

Therefore, we can say that, Cheran TCL permormance is better than NBSTC.

iv) Consumption of Diesel, Lubricants and Oils :

Table 6.4 exhibits the comparative performance of consumption of diesel, lubricant, and oils of Cheren TCL and NBSTC. The table reveals that Cheran TCL has achieved 4.01 kilometre per litre of oil during the period 1980-81 and at the end of the study period (1997-98), it has obtained 4.24 kms. per litre of oil. But in the case of NBSTC it has obtained only 3.70 kms. per litre of oils during the period 1980-81 and at the end of the study period (1997-98), it has obtained only 3.88 kms. per litre of oil. So we can say that the performance of Cheran TCL is better than NBSTC.

v) Breakdowns :

Table 6.5 reveals that Cheran TCL has an impressive record of avoiding breakdowns. It was 0.32 per 10,000 kms. run in the year 1980-81 and at the end of the study period (1997-98), it was 0.09 per 10,000 kms. run. But in the case of NBSTC, the record of breakdowns is not very impressive, it was 1,41 per 10,000 kms run during the year 1980-81 and at the end of the study period (1997-98), it was 2.17 per 10,000 kms. run. So we can say that on this parameter also, Cheran TCL has performed better than NBSTC.

vi) Accidents :

It is one of the criteria for measuring the physical performance of STU's. Table 6.6 shows the comparative analysis of accidents per lakh kms. of Cheran TCL and NBSTC. The table clearly reveals that, throughout the study period, the performance of NBSTC is better than Cheran TCL. However, after 1990-91, Cheran TCL has been able to reduce accidents, per lakh kms. to a considerable extent during the study period. After 1994-95, both undertaking reduce the accidents rate and come down to the same level.

vii) Vehicle Utilisation :

Table 6.7 shows the comparative analysis of vehicle utilisation of Cheran TCL and NBSTC. The table clearly reveals that, Cheran TCL has performed better than NBSTC in respect of vehicle utilisation. NBSTC has no match in compare with Cheran TCL. Vehicle utilisation per day on road was 291.83 (in terms of kms) during the year 1980-81 in the case of Cheran TCL and at the end of study period (1997-98) it was 429.5 per day on road. Whereas, it was only 220.00 per day on road during the year 1980-81 in the case of NBSTC and at the end of our study period it was only 264,0 per day on road (in terms of km.) Thus, Cheran TCL has done better than NBSTC.

viii) Passenger Carried :

Table 6.8 shows the comparative analysis of both undertaking. The table clearly reveals that, the performance of Cheran TCL in respect of passenger carried per bus per day is better thanNBSTC. Because, passenger carried per bus per day 726 during the year 1980-81, and at the end of the study period (1997-98), it carried 1612 passenger per bus per day in the case of Cheran TCL. Whereas in the case of NBSTC, it carried 446 passenger per bus per day during the year 1980-81 and at the end of the study period (1997-98), it carried 450 passengers per bus per day. Although, NBSTC is able to achieve the referred target to carry 400 passengers per bus per day in few years of the study period but it is less than Cheran TCL and it has achieved the referred target during whole of the study period. So, on this account also, Cheran TCL has done better than NBSTC.

After analysing the above six criteria on the basis of efficiency trends, we can draw the conclusion by saying that, Cheran TCL has performed better than NBSTC. According to the Planning Commission report, this is mainly due to well management, operational facilities, and supplying buses to the profitable routes.

2) Efficiency trends in terms of Financial Parameters :

Financial perforance of both undertakings can be viewed in terms of the followinf variables.

i) The growth of revenue per effective km.

ii) Increase in cost per effective km.

iii) Net profit/loss per km.

iv) Inpact of taxation.

v) Return on Investment.

i) Growth of Revenue per Effective Kilometre :

Table 6.9 reveals the comparative analysis of growth of total revenue per effective kilometre for Cheran TCL and NBSTC. From the begining of the study period, Cheran TCL has collected more revenue per effective kilometre than NBSTC. During the year 1980-81, Cheran TCL has earned revenue 281.00 paise per effective kilometre and at the end of the study period, it was 977.6 paise per effective kilometre. Whereas it was 209.00 paise per effective kilometre during the year 1980-81 and at the end of the study period , it was 693.5 paise per effective kilometre in the case of NBSTC. The compound growth rates in the case of NBSTC and Cheran TCL have been 1.46 and 20.18 percent per annum respectively. Thus, we can say that, Cheran TCL has increased its revenue per effective kilometre more than NBSTC during the period of our study.

ii) Cost/Expenditure :

Table 6.10 shows the comparative analysis of cost/expenditure per effective kilometre of Cheran TCL and NBSTC. The table clearly reveals that during whole of the study period NBSTC has been incurring higher cost than Cheran TCL. It is also noticed that the cost is also increased in Cheran TCL but not more than NBSTC during the period of our study. But in the year 1990-91, the cost is more than NBSTC. The cost of Cheran TCL has been increased due to the higher incidence of taxes. So, in terms of revenue on cost per effective kilometre; Cheran TCL has performed better than NBSTC.

iii) Profitability :

Table 6.11 shows the comparative analysis of net profit/loss per effective

kilometre of operation (before tax) of Cheran TCL and NBSTC. The table highlights that Cheran TCL has incurred its profit during whole of our study period. But in the case of NBSTC, it has been incurring losses every year during the period of our study. Though both undertakings are identical and plying their buses mainly in plain areas. Therefore, we can say that the performance of Cheran TCL is better than NBSTC and should be given proper attention to find out the cause of losses in NBSTC and try to maintain the amount of losses in that undertaking.

iv) Impact of Taxation :

It is one of the criteria for measuring the financial performance of STU's. The table 6.12 clearly shows that, the State of Tamilnadu levied various taxes on public sector unertaking each year. The table clearly indicates that Cheran TCL has paid more taxes per kilometre (paise) than NBSTC during the year 1996-97.

The position of NBSTC in respect of total taxes per kilometre (paise) is much lower than Cheran TCL. Inspite of that NBSTC has been incurring losses every year during our study period but Cheran TCL has been running with profit during our study period. So this factor not only effect the profitability of the organisation but also effect the fleet and vehicle utilisation. So total tax paid per bus per year can be another basis for comparison. So, on this basis also , Cheran TCL has paid more amount for per bus held per year than NBSTC during the year 1997-98. The tax system is not only much more debated throughout the country but also it effect the profitability of STU's.

v) Return on Investment :

It is also one of the criteria for measuring the financial performance of STU's. Table 6.13 shows the comparative analysis of ROI of Cheran TCL and NBSTC. The table clearly reveals that ROI is positive during the whole period of our study in the case of Cheran TCL but it is negative during the whole period of our study in the case of NBSTC. Thus, we can say that, Cheran TCL has performed better in respect of ROI than NBSTC.

Notes and Reference:

1. Parmasivanandam, A. M. **"Tamil and through Ages"**.

   Tamil Kalai Illam (madras, 1960), 13.

2. Mahalingam, T. V. **"Tamil and History"**, This is Tamilnadu, (Miss) Irawathy, A. R., ed. XXII, G. C. Madras symposium (1968), Tamil in History section,1.

3. Rangacharya, V : **"The Geographical Data of the Sangam works"**, J. N. G. A., III (No. 2, 1928), p. 43-81.

4. Tripathi, R. S. : **History of Ancient India** (Delhi, Motilal Banarasidas, 1960, p-439.

5. Ref. 4, Op. cit, P.P. 56,60, 61,71,78.

6. Pillai, K. K. : **History of South India** (Tricly, Palaniappa and Bros., 1958), p. 34-35.

7. Aiyangar, S. K. **"Ancient India and South Indian History and Culture"** (Madras, Oriental Book Agency, 1941), p. 446-447

8. Rajamanikkam, M : **Tamilag varalaru** (History of Tamil and Madras Paari Nilayam, 1959), pp 6,7.

9. Vekata Subramaniam, K. : **Local Government in Ancient Tamil and** Ref. 3, Op. cit, pp 16, 17.

10. Ramesh, A. : **"Tamil and Deccan"** : A study in urban settlements", Ph. D. (unpublished) Thesis (B. H. U. Varanasi, 1965) pp. 45, 46.

11. Srinivasachari, C. S. : **A study of recent History of the Coimbatore Region,** J. M. G. A., V 91930), 70.

12. Performance Statistics of State Transport undertakings published by CIRT, Pune, 1995-96.