CHAPTER VII

SUMMARY OF FINDINGS, CONCLUSION AND SUGGESTIONS

A growing economy needs a speedy, efficient and cheap system of transport. In a country like India, as in the case of any other developing country, the first requisite of economic development is the development of transport facilities. In the absence of adequate and sophisticated modes of passenger transport such as the railways and airways, evenly catering to the needs of the people throughout the country, bus transport has become the primary mode of transport. Moreover, its ability to penetrate into hitherto inaccessible areas and the offer of a personalised service has made the bus transport an essential ingredient of the common man's life.

Passenger road transport is a public utility service and as such it is the duty of a welfare state to provide the most economical and comfortable service to the public. By enacting the Road Transport Corporation Act (RTC Act), the Government of India recognised, as far back as in 1950, the fact that provision of passenger bus service was more desirable in the public sector than in the private sector and committed itself to a policy of nationalisation of the passenger transport services. The State Transport Undertakings (STUs), which include Road Transport Corporations formed under the RTC Act, departmental undertakings and other corporations formed under the Companies Act and the Municipalities
Act, have, over the last four decades, endeavoured to fulfill the objectives set for them. The enthusiasm of the 1950s' and 1960s' in increasing state participation, however, declined in the 1970s' and the 1980s' and its share has come down to 34.2 per cent in 1989-90 from 45.2 per cent in 1980-81. Moreover, the government is of the view—that the policy of nationalisation will be guided by efficiency of operation of existing undertakings and the extent to which they can provide consumer satisfaction. Hence, there is a need to evaluate the performance of the existing STUs.

The present study is an attempt in this direction. The overall objective of the study is to evaluate the performance of a State Road Transport Corporation, namely TNSTU – Tirunelveli division. The study is both descriptive and analytical in character. The descriptive part of the study has been based on the secondary data collected from the selected unit. The analytical part of the study has been on the basis of primary data collected from the sample passengers through interview schedule. The interview schedule has been administered to study the bus usage profile of the respondents, their preference for TNSTC Tirunelveli division in Tirunelveli district and private buses. It has been also administered to measure the levels of passenger satisfaction (PS) with regard to the bus operations by TNSTC Tirunelveli division in Tirunelveli district. The Passenger Satisfaction Score of the individual respondents formed the basis for analysing and interpreting the results in relation to the variables such as place of
residence, age, gender, marital status, education, occupation, and income, possession of vehicle, purpose of travel, distance traveled and frequency of travel.

7.1 SUMMARY OF FINDINGS

7.1.1. Physical Performance

The main objective of the study is dealt with in three major parts: physical performance analysis, financial performance and usage of passengers. In the descriptive statistical analysis, the effective kilometres run is taken as the dependent variable. The major independent explanatory variables influencing the dependent variable are broadly grouped into endogenous variables and exogenous variables. Variables such as vehicle utilisation, staff utilisation, fleet utilisation, bus break-downs, and cancellation of trips for want of crew have been listed in the group of the management controllable endogenous variables and the variables like accidents, strikes and harthas and road-blocks owing to political and other disturbances have been listed in the group of exogenous variables.

In the kilometre run performance analysis, it has been found that the TNSTC – Tirunelveli was able to produce an average of 1006.38 lakh effective kilometres per annum by employing an average fleet strength of 647 buses on the road during the study period. The real kilometres was on the rise in the case of the TNSTC – Tirunelveli, from 22.4 lakh kilometres in 2000-01 to 37.4 lakh kilometres in 2008-09.
With regard to the average number of passengers travelled per bus per day, the TNSTC – Tirunelveli had achieved an average of 1338 passengers with an average of 443 bus routes. It has been observed that during the study period, the number of bus routes had increased by 25.85 per cent in the case of the TNSTC – Tirunelveli.

The inference is that the TNSTC – Tirunelveli has opened up new routes which may be uneconomic from the point of view of operation with welfare aim attached to it.

The kilometre efficiency analysis of the sample corporations reveals that the TNSTC – Tirunelveli with an average kilometres efficiency of 102.3 per cent stood better.

With regard to the service mix of the vehicle utilization, it is observed that the TNSTC – Tirunelveli had maintained a ratio of 71:29 of it services in the city and mofussil service segments.

The vehicle utilization is another yardstick to assess the physical performance of the transport undertakings and it refers to the average kilometres run per bus per day. In this regard it is seen that the TNSTC – Tirunelveli with an annual average of 359.8 kilometre per bus on road.
The fleet utilization is another yardstick to measure the operational efficiency of the sample units. Normally, the fleet utilization is calculated by dividing the total vehicle on the road by the total number of vehicles held. The fleet utilization ratio is obtained by multiplying the fleet derived utilisation by 100. The physical efficiency measured by this parameter reveals that the TNSTC – Tirunelveli with an average fleet utilisation ratio of 92.1 has performed better.

The staff utilization is yet another important parameter in the study of the physical performance analysis of the transport corporations. The composition of the administrative staff, traffic staff and the workshop staff in the TNSTC – Tirunelveli was in the order of 12.95 per cent, 66.78 per cent and 20.60 per cent respectively for the study period from 2000-01 to 2008-09.

The manpower productivity analysis refers to the quantum of kilometres produced by the individual functional group. During the study period, the average kilometres produced by administrative staff, traffic staff and workshop staff have been in the order of 5.8 kilometres, 27.1 kilometres and 10.1 kilometres respectively for the TNSTC – Tirunelveli.

The staff-bus ratio is yet another parameter employed to evaluate the physical performance of the transport corporations. It is observed that the staff per bus has been 8 for the TNSTC – Tirunelveli.
The manpower productivity ratio analysis is also used in the performance evaluation of the transport corporations. It is the ratio between the vehicle utilization and staff-bus ratio per 100 kilometres operated. During the study period, in the TNSTC – Tirunelveli, the manpower productivity index for the administrative staff has declined from 0.26 in 2000-01 to 0.23 in 2008-09. In the case of traffic staff, it has come down from 1.49 in 2000-01 to 1.44 in 2008-09 and in the case of workshop staff the index has increased from 0.40 in 2000-01 to 0.45 in 2008-09.

The breakdowns of the buses, while on service, reduce the quantum of effective kilometres significantly. During the study period, TNSTC – Tirunelveli has met with a total number of 34,353 break-downs with an annual average of 3817 out of which 53.86 per cent have been due to mechanical defects, 6.5 per cent have been due to electrical defects, 36.02 per cent have been due to defective tyres and tubes and the remaining 1.86 per cent have been due to other reasons.

The average annual loss of kilometres works out to be 0.68 lakh kilometres for TNSTC – Tirunelveli.

It is also observed that the exogenous variables such as strikes, accidents, hartals and road blocks also affect the kilometre output. On account of strikes and
hartals, road blocks and accidents, the TNSTC – Tirunelveli has lost 23.3 lakh kilometres.

In the descriptive statistical analysis, a multiple correlation has been structured out to study the relative degree of association of endogenous and exogenous variables with the dependent variable, the kilometre output, for both the transport corporations. The multiple correlation results pertaining to the TNSTC – Tirunelveli show that there exists a high degree of positive relationship between the output (EKM) with fleet strength (0.96), traffic staff (0.95), strikes and hartals (0.95), break downs due to mechanical defects (0.95), break downs due to tyre and tube bursting (0.95). The lowest association is found among city (0.31) and moffussil bus routes (0.30).

Apart from the use of multiple correlation, a simple linear regression model was used to find out the influence of the explanatory variables upon the physical productivity of the sample units. The results obtained for the TNSTC – Tirunelveli reveal that the variables buses on road, fleet utilization ratio, accidents and traffic staff are found to be influential in determining the physical productivity of the TNSTC – Tirunelveli. It has also been observed that the administrative staff, workshop staff and mofussil routes were having negative influence on the kilometre output.
7.1.2. Financial Performance

In the financial performance analysis, it has been observed that the TNSTC – Tirunelveli has continuously incurred losses for the whole period under study. Its accumulated losses of Rs.481.71 lakh in 2000-01 had gone up to Rs.2011.36 lakh in 2008-09.

The fixed costs, variable costs and the average costs constitute the cost analysis. The fixed costs analysis applied to the TNSTC – Tirunelveli reveal that the components of fixed costs, such as personnel costs, interest payments, depreciation and taxes are having a percentage share of 61.96, 6.3, 13.82 and 17.52 respectively during the study period.

In the case of variable costs, the components are the costs relating to the input factors such as fuel and lubricants, tyres and tubes and spares. During the study period, the TNSTC – Tirunelveli had incurred an annual average of Rs.1090.59 lakh on fuels and lubricants, Rs.364.91 lakh on tyres and tubes and Rs.569.63 lakh on spares and others with a corresponding percentage values of 48.51, 16.23 and 25.34 respectively.

The Cobb-Douglas production function was used in the study to estimate the production elasticities, returns to scale and the marginal productivities of the factor inputs, both labour and capital for the sample undertakings.
The production function results obtained for the TNSTC – Tirunelveli reveal that the output elasticity of labour (L) and capital (K) are in the order of –0.13 and 0.43 respectively. In other words, holding the capital input constant, a one per cent increase in labour input results in an average decrease of about 0.13 per cent in the kilometre output (Q). Similarly, keeping labour input constant, a one per cent rise in the capital leads to an average increase of about 0.43 per cent increase in the kilometre output. The $R^2$ value of 0.94 implies that about 94 per cent of the variations in the output is explained by labour and capital. The inference is that the production elasticities of labour is negative (-0.13) and that of capital is positive (0.43).

In order to determine the nature of the returns to scale, the partial elasticities of labour and capital ($0 < B$) have been studied individually for TNSTC – Tirunelveli. The sum of the partial elasticities calculated for the TNSTC – Tirunelveli is in the order of 0.51. The above results clearly show that the corporation was working under the ‘diminishing returns to scale’, but with a difference. The lower the value of the sum of the partial elasticities of labour and capital ($\alpha + \beta$), the higher is the degree of diminishing returns to scale. Hence it may be concluded that the nature of the diminishing returns to scale is very high in the case of the TNSTC – Tirunelveli (sum of partial elasticities ($\alpha + \beta = 0.3$)).
The third dimension of Cobb-Douglas production function is the measure of marginal productivity of labour and capital. It is normally obtained by multiplying the $\alpha$ and $\beta$ by $\bar{Q} / \bar{L}$ and $\bar{Q} / \bar{K}$ respectively. In the case of the TNSTC – Tirunelveli, the marginal productivities of labour and capital have been found to be –0.06 and 0.13 respectively. It is negative for the TNSTC – Tirunelveli with –0.06, confirming the earlier results of over staffing or under utilization of labour force in the TNSTC – Tirunelveli.

In the revenue analysis, the annual average revenue and the average revenue per kilometre had been used to measure the efficiency of the transport corporation. During the study period, it is observed that the TNSTC – Tirunelveli had earned an annual average of Rs.601.41 lakhs.

The profit and loss analysis examines the net effect of cost-revenue relationship of the TNSTC – Tirunelveli during the study period. It is observed that the TNSTC – Tirunelveli had maintained a net annual average loss of Rs.820.04 lakh. In terms of effective kilometres, the TNSTC – Tirunelveli had incurred a loss of Rs.0.28.

The estimated results of simple linear regression model revealed the fact that among the significant variables, occupancy ratio had influenced the profit of the corporation followed by the variable passenger kilometres and seat kilometres.
7.1.3. **Passengers' Bus Usage**

The opinion survey of the respondents as to their bus usage profile reveals that passengers are used to travel mostly by TNSTC – Tirunelveli division, closely followed by private buses. The other government corporation buses have been ranked third in usage. This is in tune with the number of fleets plied in the region by each operator. However, it is interesting to note that the respondents' level of usage of buses among TNSTC – Tirunelveli and private varies for different groups of passengers based on their socio-economic and personal factors.

**Passengers Personal Factors and Bus Usage**

- **Place of Residence and Bus Usage**

  Both the urban and rural passengers have used TNSTC – Tirunelveli division buses more than private buses. However, among the two groups, the urban passengers have used TNSTC - Tirunelveli division buses relatively more than the rural passengers.

- **Age and Bus Usage**

  The aged and middle-aged respondents have travelled more by TNSTC - Tirunelveli buses than by private buses. Contrarily the young respondents have travelled more by private buses than TNSTC – Tirunelveli.
Gender and Marital Status and Bus Usage

Both male and female respondents have been using TNSTC - Tirunelveli buses more than private buses. However, within the group, both male and female respondents have used more of TNSTC - Tirunelveli buses and comparatively less of private buses. Similar usage pattern has been found in the case of married and unmarried respondents in the same order as that of male and female.

➢ Education and Bus Usage

Both the illiterate and literate respondents have used more of TNSTC – Tirunelveli buses than private buses and only the post graduate educated respondents have no special preference for any of the transport at all.

➢ Occupation and Bus Usage

The salaried class and students have used more of TNSTC - Tirunelveli buses than private buses and other category of respondents utilise both the private and TNSTC - Tirunelveli buses equally.

➢ Income and Bus Usage

The low income and middle group respondents prefer to travel by TNSTC - Tirunelveli buses, while the high income groups prefer to use both private buses as well as TNSTC - Tirunelveli buses.
Purpose of Travel and Bus Usage

The respondents who travel for social purpose use TNSTC - Tirunelveli buses relatively more than the private buses, and respondents who travel for business purpose utilise both TNSTC - Tirunelveli buses almost equally.

Distance Travelled and Bus Usage

The respondents who travel more distance use both private and TNSTC - Tirunelveli buses equally and those who travel less distance have used TNSTC - Tirunelveli buses more than private buses.

Owning Vehicle and Bus Usage

The respondents who own personal vehicles use more of TNSTC - Tirunelveli buses than private buses.

7.1.4. Factors that Influences the Travelers in Choosing their mode of Transport:

Among the various 13 factors considered, it is observed that only six factors like place of work, place of residence, present occupation, vehicle ownership, transportation for their school going and their own current mode of transport influence the travelers in choosing Government buses.
By using discriminate analysis, the variables that are substantially important to discriminate the travellers between users of Government and private owned buses, the following, three variables were identified. The three variables, satisfaction over the present bus, conveyance for children and vehicle owned are found to be substantially very important variables in discriminating Government and private bus users.

7.1.5. Passenger Preference

With regard to the preference between TNSTC - Tirunelveli and private buses, it has been observed that majority of the passengers have preferred TNSTC - Tirunelveli buses to private buses. However, the respondents' level of preference for TNSTC - Tirunelveli buses varies for different groups of passengers based on their Socio-economic background.

Respondents' Personal Factors and Preference

- Place of Resident and Preferences

It has been found that a majority of bus passengers from both urban and rural areas prefer TNSTC - Tirunelveli buses to private buses, and only a minority in both the cases is not satisfied with their services.
• **Age and Preference**

Among the different age groups of bus passengers, those between the ages of 25 to 35 prefer TNSTC - Tirunelveli buses more than private buses and youngsters between the ages of 15 to 25 prefer both TNSTC - Tirunelveli and private buses.

• **Gender and Marital Status and Preference**

Majority of the male and female, married and unmarried prefer the services offered by both TNSTC - Tirunelveli buses as well as the private buses.

• **Education and Preference**

Majority of the bus passengers with education upto graduation prefer TNSTC - Tirunelveli buses and those with post graduate education opt for both private as well as TNSTC - Tirunelveli buses.

• **Occupation and Preference**

Bus travellers who are employed prefer TNSTC - Tirunelveli buses more than private buses, whereas those coming under 'others' category which includes agriculturists, labourers, self-employed and unemployed have equal preference for both TNSTC - Tirunelveli and private buses.
• **Income and Preference**

All bus passengers irrespective of their level of income, more often use TNSTC - Tirunelveli buses than private buses more. However, the degree of their preference increases as the level of income increases.

• **Purpose and Preference**

The passengers who travel for social purpose always prefer to travel by TNSTC - Tirunelveli buses than private buses while those who travel mostly for 'official purpose' and 'business purpose' also prefer TNSTC - Tirunelveli buses.

• **Distance Travelled and Preference**

The bus passengers who travel short and medium distances prefer TNSTC - Tirunelveli buses while those travelling often and travelling long distance prefer other buses.

• **Frequency of Travel and Preference**

All the bus passengers who travel frequently prefer TNSTC - Tirunelveli buses. As the frequency of travel increases, the preference for TNSTC - Tirunelveli increases while their preference for private buses decreases.
• **Owning Vehicle and Preference**

Whatever may be the vehicles owned by the bus passengers, they all prefer to travel by TNSTC - Tirunelveli buses, but the degree of preference marginally decreases when it happens to be passengers who do not own any vehicle.

7.1.6. **Reasons for Preference of TNSTC - Tirunelveli Division in Tirunelveli District and Private Buses**

Various factors were given to the passengers to ascertain their reasons for preferring Government run TNSTC - Tirunelveli buses and private owned buses. The following factors, like comfort, regularity, elegance, ambience, cleanliness, moving space, speed, safety, stops, seats, courtesy extended, less crowded, timing, punctuality, frequency and audio were given to the passengers to consider and rank them.

✓ **Reasons for Preferring TNSTC - Tirunelveli and Private Buses**

The most important set of reasons for preferring TNSTC - Tirunelveli buses is the offering of 'Quick Service' and 'availability of service at convenient place and 'time'. The second sets of preference for the passengers who have given equal weightage are 'Maintenance and Appearance of the Bus', 'Safety and Reliability' and 'Cooperative attitude of Crew members'. The rest of the reasons stated are not strong enough to attract the passengers to TNSTC - Tirunelveli buses, as the scores gained by such reasons are negligible.
 Reasons for Preferring Private Buses

It is quite interesting to note that in the case of private bus operators, passengers have stated 'Quick Service' as the foremost reason for their preference. However, the average score is less than that of TNSTC - Tirunelveli buses. The second set of preferences has been accorded to the factors like 'Easy to carry luggage', 'Maintenance and appearance', 'Availability during convenient hour and time', 'Concessional facilities' and 'Cooperative attitude of Crew members' have been ranked next. The third set of factors considered for preference has gone to 'Safety and reliability.' The last set of factors considered by the passengers to prefer private buses are 'Other reasons' and 'not satisfied with the operation of TNSTC – Tirunelveli.

 Comparison of Reasons for Preferring TNSTC - Tirunelveli and Private Buses

It is inferred that both TNSTC - Tirunelveli and private operators are rendering their utmost service to the public. The private operators are small operators and ply buses mostly as shuttle services between Towns and Towns and between villages covering only short distances. They are able to give more personal service to travellers, whereas the Government-owned TNSTC - Tirunelveli, being a big operator running mostly on long-routes and working
under corporate culture is able to give relatively quick and efficient service to the passengers.

7.1.7 Passenger Satisfaction

Overall Passenger Satisfaction

The passengers are satisfied with the operation of TNSTC - Tirunelveli buses as well as private buses. However, the passengers' satisfaction with the operation of TNSTC - Tirunelveli division is marginally higher than that of private bus operation.

Components of Passenger Satisfaction

❖ Passenger Comforts

The passengers are not satisfied with the 'Comforts' in Government buses when compared to that of privately run buses.

❖ Punctuality and Regularity

The passengers are satisfied with the 'Punctuality and Reliability' of the operators, namely, TNSTC - Tirunelveli and private. However, comparison of TNSTC - Tirunelveli and private operators in this regard reveals that the passenger satisfaction is relatively more for TNSTC - Tirunelveli operations than that for private operations.
Safety and Reliability

The level of 'Safety and Reliability' has been higher in TNSTC - Tirunelveli operation than in private operation of buses.

Crew-Related Satisfaction

The attitude of the passengers towards the crew has been almost the same in the case of TNSTC - Tirunelveli buses as well as private buses. Difference in ownership has not contributed to the difference in crew-related satisfaction.

Social responsibility

The attitude towards social responsibility by both private as well Government owned operators matches the expectations of the passengers by giving various facilities like concessions to school children, special seating arrangements for physically challenged and senior citizens and seasonal offers and packages.

Management efforts

Management’s efforts in fulfilling the service promises, special arrangement of buses during festivals and seasons, safety and cleanliness, sensitivity towards customer’s complaints and suggestions, price differentiation
and patience in explaining the problems are some of the factors that are liked and preferred by the passengers traveling in Government run buses.

- **Bus related attributes**

  It is found that there is a vast difference between the expectations of the passengers when it comes to the attributes of the buses. Passengers are of the opinion that the general appearance of the buses, and maintenance of buses, and display of name and number boards of Government buses are not up to the level of the private buses.

- **Psychological (travel related) attributes**

  The bus passengers feel that travelling in a bus involves unnecessary psychological tensions and the physical efforts in experiencing the services seems to be unnecessary and unwanted. Even though the maintenance of the vehicles are not that good, the only comfort is that there is not much of a break down of these buses while travelling.

**7.1.8 Opinion of passengers towards Government owned buses and Private owned buses**

Following are the general opinion and preference of all the passengers about the Government owned buses and private owned buses.
The public in general feels that a person can save money by travelling in public services and this indicates that public transport facilities are cheaper and the passengers can save money by travelling in Government buses.

The public also feels that there are more private vehicles than Government buses in certain routes shows the dominance of private buses in certain routes.

The public in general do not like to travel in crowded buses and vehicles. It reveals the comfort level expected by them.

7.2. SUGGESTIONS

In this section, a few suggestions are made for improving the level of passenger satisfaction. These suggestions have emanated from the discussions the researcher has held with the passenger respondents, bus crew and the officials of the transport corporation and also out of own experience and observation.

✔ Better Maintenance

The buses are cleaned before being sent out for the trip. They are not cleaned again at bus stands or at the turning points except in certain towns. Such cleaning facilities have to be extended to all the places and to all the buses, especially to the night halt buses. This might bring satisfaction to the passengers; otherwise, they might get irritated at the first instance itself, which may lead to a
chain of actions leading to further dissatisfaction. Hence TNSTC - Tirunelveli can either appoint persons to clean the buses at the turning points or, cleaning of the buses can be given on contract basis.

Spare parts have to be changed immediately when they wear out. The shutters, glass panes and wipers are to be kept in working condition.

✓ **Spacious Leg Room**

Seat space inside the bus is very limited and causes a lot of inconvenience during the travel, especially during the long journey. The leg room space is also insufficient which makes travel irksome. These inconveniences are found in the new buses of TNSTC - Tirunelveli, which are built in the TNSTC - Tirunelveli workshop itself. Hence there is a need for a change in the seating arrangements of the buses of TNSTC – Tirunelveli so as to provide more leg space. The overall design of Bangalore Metropolitan Transport Corporation (BMTC), Bangalore buses may be adopted by TNSTC - Tirunelveli so as to provide more leg space for the passengers.

✓ **Luggage Rules**

Allowing certain goods and determining the weight and freight of the goods by the conductor gives chances for misuse and creates problem among the passengers. However, the checking inspector and other authorities have to be a
little lenient with regard to the rules. Further, the list of freight charges, for
different types of goods has to be exhibited in the bus stands and in the buses as
well.

✓ **Concessions to Regular Users of TNSTC - Tirunelveli**

Concessions in the fare may be given to the regular passengers, as practised by the private transports.

✓ **Issue of Coins**

One of the main reasons for conductor - passenger confrontation is the non-availability of coins of lower denominations in issuing the ticket for the travel. Sometimes the conductor writes the balance money to be refunded to the passengers on the back of the ticket. The passenger will have to show it to the conductor and get the balance money before alighting from the bus. At times, when both the conductor and the passenger forget, it leads to a lot of further complication. In order to reduce this problem, the conductor has to be given coins of lower denominations for at least Rs. 50, when he starts his work.

✓ **Minimizing the Break-downs**

Steps must be taken to avoid breakdown by checking thoroughly the bus before the bus is pressed into service. The report of the driver and conductor on the defects in the bus has to be attended to immediately.
✓ Prompt Break-down Service

Break-down service has to be provided immediately. TNSTC - Tirunelveli buses have to instruct all the buses passing through any break down bus has to stop and pick up the passenger in order to enable the passengers to continue their journey. The driver who does not stop the bus has to be severely dealt with. Women and children should be given preference in boarding the next available bus service to reach their destination.

Further, the passenger has to be given an option of getting refund of the fare for the remaining distance of the journey or travel by the other bus. This practice is being done in the case of private buses. At times, the passengers may opt for the first one and avail of the services of private buses also.

✓ Amenities and Other Conveniences

Proper maintenance of the existing waiting-rooms in the bus stands, construction of waiting-halls and rest rooms wherever possible are suggested to offer better amenities for the passengers. Buses should be stopped for refreshment/food at TNSTC - Tirunelveli or government certified hotels or restaurants only. These hotels should provide both vegetarian and non-vegetarian food and also provide common eatable items at reasonable prices. TNSTC - Tirunelveli can print and issue a time schedule of buses departure on the various
routes. The same should be printed both in Tamil and English incorporating other inter-connecting routes. Public address system should be introduced in all bus stands for announcing the departure and arrival timings of buses. The employees of TNSTC - Tirunelveli should use their travel privilege without inconveniencing the passengers. They should also be discouraged to stop buses at their convenient places.

✓ **Introduction of Express Service**

The TNSTC - Tirunelveli runs no express buses. Of course in certain routes and services, ‘Point to Point' services have been introduced which do not stop in between and ply through by-pass roads, where such roads exist. Tickets for such buses are to be booked earlier by buying a token costing Re. 1. It is suggested that TNSTC - Tirunelveli can also contemplate running exclusive express services in the long routes. Some additional facilities such as headrest, arms rest, better cushions, drinking water and more legroom space may be provided in such express services. The additional cost incurred in providing these facilities may be recovered by charging higher fares than the usual rates, so that passengers who would like to pay more and prefer better services may be benefited.
✓ Private Buses in Long Routes

TNSTC - Tirunelveli division and other Government Corporations buses alone ply in the long routes of this region. Private buses can also be allowed to operate in certain routes with a distance of 75 miles. In order to create healthy competition between TNSTC - Tirunelveli and the private sector, private buses can also be allowed to ply buses in long routes. However, such permits may be given to big and reputed operators in the region. Further, the transport authorities have to strictly enforce the rules regarding overloading and deviations from the permitted routes and other malpractices.

✓ Suggestion and Complaint Book

The present practice of writing suggestions/complaints to the Depot Manager or other officials at the Divisional office/Head office may be continued. In order to gauge the opinion of the passengers and public, 'Suggestions and Complaints Book' may be kept with the time keeper in the bus stand and the address of the place where they are available may be displayed/written in the bus. This may help the TNSTC - Tirunelveli to know the needs of the passengers immediately and act upon the same.
✓ **Transport Advisory Board**

The Government may set up a District-level Transport Advisory Board to examine the representations on transport operations for ensuring greater efficiency. This committee may meet once in three months. The members of these committees may be drawn from businessmen, members of voluntary agencies, students, police officials, teachers and experts in transport management. This committee may deliberate upon the measures to be undertaken by the Transport Corporations to improve Passengers' Satisfaction. Besides, steps must be taken to ensure a harmonious relationship between the passengers, crew and the corporations by discussing various issues and after proper recommendation by this committee.

✓ **Proper Roads**

The inadequacies of the road system are causing massive losses in the shape of fuel wastage, wear and tear of tyres, frequent break-downs, low vehicle utilisation, loss of travel time and of course, the accidents. With the ever-escalating traffic, many roads require massive investment. So the government should earmark a sizable portion of transport taxes for rebuilding roads. Further, it is also suggested that instead of going for additional road network, top priority must given for rehabilitation and reconstruction of the existing network.
✓ **Regular Revision of Bus Fare**

The bus fare in Tamil Nadu is low (10.5 paise per km) among various southern states. In the case of Andhra Pradesh it is 12.5 paise per km; Karnataka 14.2 paise per km and Kerala 13 paise per km during the year 2008-09. While revising the fare, the cost factor has to be taken into consideration. A standing fare revision committee must be constituted to go into the cost factor of transport operation and revise the fare at regular intervals of time.

✓ **Reduction in Taxes**

Motor Vehicle Tax is high in Tamil Nadu. TNSTC - Tirunelveli has paid tax at the rate of Rs. 69,767 per bus per year. This rate is higher than the rate prevailing in other Southern States like Andhra Pradesh (Rs. 55,859) and Kerala (Rs. 23,253) in the year 2008–09. There is an immediate need to reduce the tax at least to the level of the rate in neighbouring States.

✓ **Case of Subsidy**

One of the main reasons for the losses of STUs is operating uneconomic routes and discharging certain social obligations like free bus pass to students. As these services are being done on behalf of Government for the welfare of its citizens, it is justifiable that the State should compensate the STUs with subsidy. The Government or the respective Government departments can reimburse them
at the end of the year, the actual amount of loss due to such services offered by TNSTC - Tirunelveli.

7.3. CONCLUSION

The present study is an attempt to evaluate the performance of a state-owned road transport corporation, namely TNSTC – Tirunelveli. The study is based on secondary data and the primary data collected through personal interviews of sample passengers in Tirunelveli district. The study highlights the physical, financial, personnel management and the social performance of TNSTC - Tirunelveli and compares the level of passenger satisfaction with TNSTC - Tirunelveli and private buses in Tirunelveli district. The findings of this study will help the government to decide on the share of private and public sector in passenger road transport and for the overall development of Transport Corporations in Tamil Nadu. The study will also help the TNSTC - Tirunelveli to improve its performance. It is, therefore, earnestly hoped that the authorities will consider these suggestions and try to implement them in order to improve the efficiency of the bus service in Tamil Nadu.
7.4 ISSUES FOR FUTURE RESEARCH STUDIES

The following lines of research are suggested for the future researchers on passengers transport in Tamil Nadu.

1. An inter-firm study of working conditions, job satisfaction and involvement of crew members of public and private sector in Tamil Nadu.

2. Performance Evaluation studies of Tamil Nadu Transport Corporations with those in the neighbouring States.

The researcher presents this study with the hope that this will draw the attention of future researchers, government, transport authorities and experts, management of TNSTC - Tirunelveli and private operators. If the study helps them in any form, the researcher will amply rewarded.