Chapter - 7

SUMMAR Y AND CONCLUSION
This chapter initiated the presentation of various problems of passengers road transport in the Davangere Division of Karnataka State Road Transport Corporation. The discussions in the previous chapters have been built around a few hypotheses.

7.1. Major Findings

The major findings of the present study are presented under different heads.

- Corporation level
- Inter-Division Comparison
- Commuter’s perception
- Crews perception and
- Comparison between private and public

7.1.1. Corporation level

- CPK increased for the study period in absolute terms and Compound Annual Growth Rate (CAGR) for the total period works out to be 5.84 paise per kilometer per annum. The above total period was divided into two sub-periods (1992-92 to 1999-2000) for the sake of comparison. The cost per kilometer increased at the rate of 5.67 paise per kilometer per annum. During the second sub-period (2000-01 to 2006-07), the cost per kilometer increased at the rate of 6.48 paise per annum.
Thus, it is recording little high increase in comparison to the first sub-period.

- Earnings per kilometer recorded 7.0 paise per kilometer per annual growth rate which again rose faster in the second sub period than the first sub-period. This resulted into a gross profit margin of 1.54 paise per kilometer annum for the total study period. The gross profit is more in the second sub-period than the first period.

- The magnitude of gross profit margin although remarkable improvement in the second sub period as compared to first sub-period.

- Load factor recorded positive annul growth rate of 2.71 per cent for the study period.

- With reference to non financial indicators, the rate of accidents witnessed -4.08 per cent per year.

- The rate of break downs showed negative trend for the reference period with a negative growth rate of -1.2 per cent per annum. The second sub period, however, recorded positive growth rate of -1.7, which may considered as low.

- In the case of fuel consumption, the growth rate of entire study period was 0.12. The growth rate of first sub-period was 0.06 per cent per annum and it shows that the corporation taking positive steps toward fuel consumption for controlling the cost of operation at the second sub period.
• The average tyre life increasing from 102749 kms in 1992-93 to 120891 kms in 2006-07 and the growth rate of entire study period was 0.19. Here, the corporation resulted in optimum utilisation of spares (Tyres).

• In case of Punctuality in service, the Corporation has been able to adhere to time schedule in respect of both the departure and arrivals. The Corporation shows fluctuating figures between 90.7 and 93.8 in years 1992-93 to 2000-01, in both of the indicators. But, thereafter both of the indicators crossed 95 per cent of punctuality, which has direct impact on the reputation of the Corporation.

7.1.2. Inter-Division Comparison

• Except Mangalore Division, all the Divisions have improved fuel productivity during the study period on continuous basis. Still their performance from the viewpoint of fuel productivity is average. All Divisions have allowed the fuel productivity to move in both the directions (i.e., increase and decrease). For instance, Kolar Division obtained 4.4 kms per litre of diesel during 1992-93 but allowed it to decline to 4.35 kms during 1996-97 and 5.34 kms in 2006-07. Consequently, it stands in the 6th place. The performance of Bangalore (C) Division is very poor with an average fuel productivity of only 4.61 kms per litre of diesel though it has improved its performance from the viewpoint of fuel productivity on continuous basis. The performance of the Davangere Division is satisfactory, Davangere Division shows good average fuel productivity as
compare to other all old Divisions and placed third next to Tumkur and Chickmagalore but little higher than the average for all the Divisions of 4.77 kms.

- The Chickmagalore Division uses minimum number of employees per schedule and therefore stands in the first place followed by Tumkur, Mangalore and Mysore (R). The ratio is highest in case of Bangalore (C). Another important point is that majority of the Divisions have been able to reduce the staff ratio per schedule over years on a consistent basis. But in the case of Davangere Division shows fluctuating with high ratios in the first eight years (ratio 5.82 in 1992-93, 6.33 in 1994-95, 5.84 in 1997-98 and 6.28 in 2000-01) and than it moves decreasing. Consequently, it stands in the ninth place. Hence, Davangere Division has to give importance to reducing staff ratio per schedule for control over the total operation cost.

- From the view point of fleet utilization, Chickmagalore Division stands first place as 97.214 percent (average) of available fleet are used for revenue generating activities. This was followed by Hassan Division with an average of 95.066 percent, Mysore (R) Division with an average of 94.66 percent and Tumkur Division with an average of 94.4 percent, Davangere Division stands in the eighth place with average fleet utilization percent of 92.78. Bangalore (C) Division is the least efficient with only 90.55 percent fleet utilization. If Davangere division is able to increase the fleet utilization ratio to what Chickmagalore Division has achieved during 2006-07, then it is possible for Davangere Division to lower the investment on passenger
vehicles by about 3 percent. Hence it has to give importance to this aspect.

- There has been a continuous improvement in the vehicle utilisation. From the viewpoint of this parameter, Bangalore (C) Division stands in first place followed by Mangalore Division. Once again the Davangere Division shows satisfactory performance and it occupies third place. Bangalore (R) with only 325.2 kms (average) per day per vehicle on road is the least efficient out of these eleven Divisions.

- Davangere Division achieved 161235 kms (average life of tyre) during 2003-04 but allowed it to decline to 122560 kms and 119524 kms in the years 2005-06 and 2006-07 respectively. Consequently it stands in the second place, next only to Mangalore Division. The performance of the Bangalore (R) Division is very poor productivity of only 117521.1 (average) kms life of tyre.

- As far as the punctuality from the point of view of departure is concerned, Mysore (U) Division stands in the first place as the percentage of departures as per the scheduled time comes to, on an average 97.27 followed by Chickmagalore Division with 96.55 and Bangalore (R) 95.41 per cent of vehicles, on an average, leaving the stations as per the scheduled time. Tumkur Division takes last place as the average percentage of departure as per scheduled time was only 88.88. But in the case of Davangere Division also shows satisfactory performance
and stands in fourth place with as the average percentage of departure as per the scheduled time 95.35.

As far as punctuality in arrivals is concerned, Tumkur Division stands in the first place as percentage of regularity in arrival within the allowed time is 98.27 followed by Mysore (U) Division with 95.3 per cent and Kolar Division with 97.0 per cent. But in the case of Davangere Division was not showing satisfactory performance and stands in sixth place as percentage of regularity in arrival within the allowed time is 96.64 per cent. In this case Bangalore (C) Division takes last place.

- Rate of accidents is very low in the case of Mangalore division where it is 0.155 per lakh effective kms operated. This is followed by Mysore (R) Division with 0.161, Mysore (U) Division with 0.166 and Chickmagalore Division with 0.167. The performance of Davangere Division is very poor as the rate of high at 0.23 which even higher than the average for all the Divisions of the Corporation. The officials of Davangere Division should do something concrete to ensure the safe journey to the passengers.

- Rate of breakdowns is very low in the case of Chickmagalore Division where it is 0.10 per 10000 effective kms operated followed by Mysore (U) Division and Hassan Division. Rate of breakdowns is very high in the case of Bangalore (C) Division where it is 0.10 per 10000 effective kms operated and stands in
the last place. But the Davangere Division takes fifth place with little satisfactory performance.

- It is apparent that the performance of Davangere Division is very poor from the viewpoints of both Physical performance and Quality of service. Therefore, profitability is negative. The Fuel Productivity, Vehicle Utilization and life of tyre are satisfactory. If Davangere Division wants to give better performance it must follow the averages of Chickmagalure Division for staff ratio, fleet utilisation and rate of breakdowns, Tumkur Division for Fuel Efficiency, Mangalore Division for tyre life and accidents.

- The Corporation was stands in the upper place compared with Davangere Division of both financial indicator (CPK & EPK) in the entire Study period (1992-93 to 2006-07) except the financial years 1996-97 and 1998-99.

- Whole Corporation on CPK increased for the study period in absolute terms. And Compound Annual Growth Rate (CAGR) for the total period works out to be 5.84 paise per kilometer per annum. But in the same period Davangere Division was increasing with rate of 6.31 paise per kilometer per annum.

- In Comparison, the cost per kilometer increased at the rate of 5.84 paise per kilometer per annum in the Corporation and at the rate of 6.31 paise per kilometer per annum in the Division. Thus, Davangere Division is recording little high increase in comparison to the Corporation with 0.47 paise per kilometer per annum.
• As regards Earnings per kilometer increased year by year. CAGR for the total period is 7.54 paise per kilometer per annum in the Corporation. But in the same period Davangere Division increases at the rate of 7.03 paise per kilometer per annum. The difference between CPK and EPK is 1.7 and 0.72 paise per kilometer per annum for the reference period in the Corporation and Division respectively which shows profitability of the Corporation and Division.

7.1.4. Commuters Views and Perceptions

• With regards to the Arithmetic Mean values KSRTC and Private sector bus operation is found nearly same. The Calculated \( t \) value between these two means of Regularity, Frequency, Comfort Punctuality, Speed and Fare is 0.544, -3.321, 0.856, -0.949, and -3.154 respectively, thus, in this regards there is no much difference between the KSRTC and Private sector bus operation in the area of Davangere Division.

• But in the case of yardstick is concerned, Arithmetic mean value of the KSRTC bus operation is found higher (2.5053) than the private sector bus operation (1.7819) in the Division. The estimated \( t \) value between these two means is 8.690, which is found greater than the critical value of \( t \) 1.96 at 5 per cent level.

• With respect of safety, there is significant difference between the two forms of ownership of bus operations, but in all the other parameters, used by the Researcher, it is not statistically proved that there is not significant difference between the two
forms of the ownership of bus transport operation except Safety yardstick.

7.1.5. Commuter’s Perception of Safety and Crew Quality
Yardsticks

- Maintenance of the buses is better under Public (KSRTC) ownership, for 64.3 per cent of the total respondents, interviewed in the Division opinioned so. While it was only 7.6 per cent of the commuters opine that maintenance is better under Private ownership buses. It shows that Davangere Division has better maintenance of buses compare to private one. As regards, in the view of commuters break downs and accidents (36.7 per cent and 57.6 per cent respectively) are high in Private sector. Against to this it is very low as 17.6 and 7.1 percent of the commuters view that breakdown and accidents are high in private sector buses, but in the case of KSRTC have good opinion from the commuters against Break downs and Accidents with 17.6 per cent and 7.1 per cent respectively.

- Another safety issue is negligent driving. It is found here in the private owned buses as 49.5 per cent of the commuters interviewed have opinion so, but only 14.3 per cent viewed that negligent driving in KSRTC buses.

- 67.1 per cent of the commuters view the first aid kits in the KSRTC buses and only 3.3 per cent of the commuters view in the private buses and again same result is found in the issue of Dress code. It is implies that, commuters are more secured in
the KSRTC buses compared to the private buses in the Division.

- The causes for road accidents were assigned places in descending order on the basis of commuters' opinions. Rash driving stands first place in the causes for road accidents followed by improper road signals and Vehicle condition. Over speed, being the major causes for road accidents but it stands in 12th place out of 13.

- Bus transport users prefer KSRTC ownership in the Public Road Transport Operation (48.6 percent of commuters' opinion). But only 12.9 per cent of users opine that the private operation is better than the public transport operation. But in the meanwhile, 36.7 per cent of commuter opines both private and KSRTC ownership in the Public Road Transport operation.

7.1.5. Crews View

- In the respect of working hours, the 80 per cent of the private employees are having satisfactory among 30 respondents, but only 46 per cent of the KSRTC employees are have satisfaction about their working hours among 60 respondents in the bus transport system. 82 per cent of the KSRTC employees are not satisfied with the salary and savings, but in the private employees are satisfy with his salary at 70 per cent.

- In both the form of the bus transport employees are not satisfied with leave facilities in the Division. 65 employees among 90 respondents, are expressed their negative opinions
against leave facilities in the bus transport system in Davangere Division. In the matter of family concession and incentives, maximum of the employees are not satisfactory in both the form of bus transport system. As regards, relationship between employee and employee, employee and passengers, 95 and 83 per cent of the employees have satisfactory relationship with passengers and employees respectively. It shows there is good relation in peoples with each other, when traveling in the buses.

But in the case of Relationship between employees and employers, 73 per cent of the employees have satisfactory relationship with employers out of 30 respondents in the private bus transport system, but 50 per cent of the employees are expressed their dissatisfaction relationship with employers in the KSRTC at Davangere Division.

In the Davangere Division, maximum employees are had a negative satisfaction of all the parameters in the yardsticks, except relationships with employees and passengers only.

- 59 out of 60 KSRTC employees and 26 out 30 private employees favor the necessity of labour unions in the bus transport system. It means 94 per cent of the total employees are felt that, labour Unions are necessary in the both the form of the ownerships.
7.1.6. The Public (KSRTC) and Private- Operational Aspects: A Comparison

- The KSRTC was earning profit of 75.4 paise per kilometer whereas Private sector earning profit of 180 paise per kilometer in their operation. It means Private sector shows good financial performance than the KSRTC in Davangere Division.

- KSRTC occupies dominant position in both the parameters. In case of Fuel productivity KSRTC fares better as with compared to private Sector. The Fuel productivity per litre on an average in respect of KSRTC is 5.07 kms as compared to 4.1 kms in private sector. In case of tyre utilisation, the same result was found in Davangere Division. Utilisation of tyre in KSRTC was 120891 (average) kms as compared to 65000 (average) kms in private sector. It shows that, in Physical performance, the KSRTC was more efficient than Private Bus operation in Davangere Division.

7.2. Suggestions

Following suggestions are offered to improve the Divisional performance, which in turn improves the performance of the corporation.

- In order to increase the vehicle productivity in the Division the percentage of mofussil buses, staff productivity and kilometer efficiency should be increased and new routes should be opened.
In order to improve KMPL (Fuel efficiency) the following suggestions are made.

- Wastage of fuelling to be avoided
- Orientation to drivers to be given for the conservation of fuel
- Providing appropriate gear box for local and long route operations, as average speed in two different considering environment differs significantly.
- Avoid dead kilometer as much as possible

The life of tyres is mainly depends on, road condition, load factor and weight of the body. Driving method also contribute to improve the life of tyres and therefore tyre incentives needs to be given to concern staff and improving quality control systems in tyre shops in repairing and retreading of tyres.

In the light of cost of operation, the Divisional managers should take proper measures to achieve economies in operating costs. A proper plan for cost control and reduction should be evolved and the Divisional Managers must be made responsible for achieving the desired results and to extract maximum work from the employees in the Divisions.

Maximum of the break downs were due to mechanical defects, which can be reduced if the average buses are completely scrapped and maintain with well qualified mechanical staff.

Accidents could be minimized through proper road marking, road sings, sped limits, improvement of junctions road surface and lighting conditions, proper upkeep of vehicles, continuous
improvement in the design of vehicles and training of vehicles, continuous improvement in the design of vehicles and training of drivers, education of other road users including pedestrians and also strict enforcement of traffic laws. Most important fact is that to minimize accidents is a collective responsibility of driver, Government, pedestrians and road users.

7.3. Conclusion

The present study is an attempt to consider various aspects of physical and financial performance of State Owned Road Transport Corporation. The work has been analysed in detail within the objectives mentioned and exhausted almost all the secondary and primary sources for collation of data. Based on the findings of study few suggestions are being offered at the end. The suggestions, if implemented in good faith would certainly be helpful in improving the performance of the Public Road Transport System both in the Division and State.