Chapter V

SUMMARY, CONCLUSIONS AND SUGGESTIONS
State Road Transport undertakings have been playing a dominant role in the passenger road transport sector in India. Their share in the total passenger traffic has been increasing from time to time. STUs are alone expected to meet more than 70.00 percent of total road passenger traffic. In order to meet such a huge task, it is necessary for STUs to build up their physical and financial resources and become operationally efficient. But if we look at the present status of STUs in India, it is doubtful whether they can meet such a huge task under these existing competitive situations. The STUs had gone into red particularly from 1981-82 and their losses are mounting year after year. The cumulative losses of all STUs had aggregated to Rs. 2935 crores at the end of 1991-92. This is the reason why they have faced severe criticism in the recent years and are branded as inefficient organisations and considered as drag on the society. It is borne by the fact that there has been a contribution from these STUs in the attainment of various objectives of promotion of best possible system of transportation, balanced regional development and urban development with committed and continued efforts with their popular, cheap, efficient and stable passenger transport operations. Their role in the form of honest tax payer and the ideal employer supporting the Government in implementing the various schemes and fulfilling various social obligations. Their value added rural transport operations have become twined to solve the various consequent insurmountable problems of rural India.

The STUs which were enjoyed monopoly for more than five decades, are unable to enjoy a total monopoly at present due to the increasing role of
privatization and financial crunch with the concerned State Governments. The Government's inability to bear the losses, the Planning Commission's guidelines towards encouragement of entry of private sector in road transport, inadequate budget support for future capital requirements to meet incremental passenger traffic demand etc., are limiting the further expansion of these STUs.

The present study focussed attention on the evaluation of physical, operational and financial performance of A.P.S.R.T.C, the oldest and second largest passenger road transport corporation in India. Inspite of phenomenal growth and tremendous improvement in various physical and operational parameters, APSRTC could travel through ineluctable route of mounting losses. The corporation entered into a syndrome of losses along with other major STUs in the country. It started incurring losses from 1977-78 and in several years it incurred huge losses in it's history. The cumulative losses of the corporation touched the staggering figure of Rs. 100.43 crores by the end of 1991-92. The present scenario of APSRTC calls for a suitable corporate strengths to chalk out a course of action at least for it's survival, if not for growth. This study is, therefore, intended to review the generic corporate strategies before APSRTC for the improvement of operational efficiency, quality of service and the financial performance. It is perceived that the adoption of a DSS is useful in planning the resources, allocating the resources utilising the resources efficiently and ensures the improvement in operational efficiency, quality of service and financial position of APSRTC. This study has been carried out with the objectives of (i) reviewing the financial performance of APSRTC (ii) evaluating the operational efficiency of APSRTC, and (iii) analysing role of DSS for achieving the multiple
objectives. To fulfil the objectives, the data required for the analysis has been collected from the secondary sources. The so collected data are used in reviewing the physical, operational and financial performance of APSRTC. Chapter One of this study, outlined the importance of public sector passenger transport, the role and rationale of SRTUs in India, review of literature, objectives, methodology, limitations of the study, and chapterisation.

CHAPTER TWO:

In this chapter an attempt has been made to analyse the financial performance of APSRTC. Review of cost-revenue relationships, study of the structure and trends of costs and analysis of tax burden, are made for evaluating the financial performance of APSRTC. An inter-firm comparison was followed to appraise the performance of APSRTC.

While reviewing the cost and revenue performance of APSRTC during the study period, a continuous increase throughout the study period was observed in these two aspects. The revenue of Rs. 35,971.32 lakhs in the year 1985-86 reached to the figure of Rs. 2,05,296 lakhs by the end of the year 1998-99. The cost which was Rs. 34,691.10 lakhs in the year 1985-86 reached to a staggering figure of Rs. 2,15,160 lakhs at the end of the study period. During these 14 years of study period, the corporation could get profits for seven years and losses for remaining years. Though the number of years in which the corporation get profits is equal to the number of years in which the corporation reported losses, the figure of profits is uncomparable to the figure of accumulated losses. The corporation could get Rs. 11,040.97 lakhs as a
profit from seven years and Rs. 24,760 lakhs as a loss from seven years resulting a net loss Rs. 13,719.03 lakhs during the study period. A wide variations between revenue and cost in the last two years of the study period resulted a heavy loss. While observing indices of cost per effective kilometre and revenue per effective kilometre, the index of cost per effective kilometre is well above the index of revenue. Relatively, the total cost showed an upward trend over the revenue trend in the corporation.

The analysis of profit & loss position of selected STUs revealed that the cost and revenue trends resulted the net loses in all STUs during the study period. Relatively, the corporations of Gujarat, Maharashtra, Karnataka and Uttar Pradesh States have incurred huge losses during the study period. Though APSRTC made profits in seven years, the huge losses in the remaining years compelled the corporation to get a net loss. It is observed that APSRTC could get profits in the years in which the other STUs fail to get the profits.

While reviewing the structure and trends of costs in APSRTC, personnel cost, material cost, and cost on taxes, are considered as the major components of total cost. The indices of taxes, personnel cost and material cost are above the indices of other components of total cost. The indices of personnel cost and material costs, are increased at a relatively faster rate from the year 1991-92 to 1996-97. It is also observed that the corporation’s tax burden was relatively very high in the years 1993-94, 1995-96 and 1996-97. The higher amounts of depreciation were provided in the years 1991-92, 1995-96 and 1998-99.
The material cost trends indicated that there is a continuous increase in all elements of material cost, viz., cost on fuel, cost on tyres and tubes, and cost on auto spare parts. A steep increase in fuel cost was noticed in the year 1990-91 (due to Gulf crisis) and almost the same trend has been continued till the end of the study period.

APSRTC could generate 96.00 percent of its total revenue from the sale of tickets (i.e. traffic revenue) and the remaining from other sources (non-traffic revenue). It implies that the corporation should try to increase the non-traffic revenue. It should try to realise more revenue from advertisements, rents, and by extending ancilliary services.

The analysis of tax burden revealed that the STUs are affected both direct and indirect taxes of varying description levied by the Central and State Governments. The two major principal taxes levied by the concerned State Governments are motor vehicle tax (MV Tax) and passenger tax. Together they constitute more than 98.00 percent of total state taxes on the passenger transport sector. On the basis of pre-tax margin, it is perceived that the STUs are generating enough revenue to meet interests, depreciation, good wages to their employees, material costs and the cost incurred for fulfilling social obligations. However, the surpluses realised after meeting all these expenses are not enough to pay the taxes levied by the State Governments. If we include the taxes in total costs, ‘attainment of profits’ look like a distant mirage in these STUs. The figure of ‘tax paid per bus per year’ is very high in MSRTC (Rs. 1,13,365) followed by Kn.SRTC (Rs. 90,297) and APSRTC (Rs. 66,752).
CHAPTER THREE:

Study of physical and operational performance of APSRTC and assessing it’s efficiency was done in this chapter. The operational efficiency was measured on the basis of parameters of quality of service and also the physical parameters which indicate how efficiently the resources of the corporation are being utilized. Both quality of service parameters and physical and operational parameters play a significant role in generating revenues. Fleet strength, Fleet utilisation, Vehicle utilisation, Occupancy ratio, Staff productivity and Fuel efficiency parameters are considered more appropriate for reviewing the physical and operational performance of APSRTC. Passenger amenities provided by the corporation to the travelling public, rate of accidents and breakdowns, cancellation of scheduled services, regularity and punctuality aspects were studied in evaluating the “quality of service” of APSRTC.

Fleet strength is considered as an important indicator of STUs efficiency and also the financial viability because its substance and growth indicate how fast an STU is growing and increasing it’s ability to undertake scheduled kilometreage. APSRTC has been emerged as the largest transport undertaking with 17,885 buses by the end of 1998-99. It could made impressive addition of buses in the years 1987-88, 1989-90 and 1996-97. The index of APSRTC’s fleet strength is very high when compared to the indices of MSRTC, Kn.SRTC, and GSRTC.

Fleet utilisation is regarded as the “Acid test of efficiency” as it indicates the share of revenue earning vehicles out of the total fleet of the corporation
and reflects the efficiency of the maintenance department of the corporation. The average fleet utilisation of APSRTC was much higher (95.59%) than Kn.SRTC (88.95%), MSRTC (88.76%) and GSRTC (84.70%). The corporation could maintain fleet utilisation above 95.00 percent in several years which others did not maintain during the study period. It implies that the corporation could have followed intelligent route scheduling, efficient fleet maintenance and low cancellations.

Vehicle utilisation indicates the effective kilometres (revenue earning kilometres) performed by the corporation buses on the road. An improvement in vehicle utilisation leads to decrease in fixed costs (like personnel cost, interest on capital, motor vehicle tax, etc.,) and thereby reduces the unit cost of operation. Inter-firm comparison revealed that GSRTC could achieve high vehicle utilisation and APSRTC’s position is second in this aspects. It also revealed that there is a much scope for improvement in vehicle utilisation in APSRTC.

Occupancy ratio is the ratio of seats occupied by passengers to the seats offered by the corporation. Kn.SRTC was successful in generating passenger kms. (remunerative kms.) equivalent to 84.88% of total seat kms. offered on average during the study period. The occupancy ratio (average) achieved by APSRTC was only 75.93 percent. It implies that APSRTC has to improve the occupancy ratio to the level of Kn.SRTC to get more revenue from the same number of buses which were put on road. Now APSRTC has set the target for achieving 5.00 percent improvement over it’s present occupancy ratio.
Staff productivity or manpower productivity conveys the figure of "effective kilometres" produced per employee per day on average. Improvement in staff productivity leads to low bus-staff ratio which represent the situation of requirement of less number of employees/staff for the same level of operation or increase in volume of operation (in eff. Kms.) from the existing staff strength. Since the personnel cost is the major component of total cost, increase in staff productivity considerably reduces the unit cost. Inter-firm comparison revealed that APSRTC is next to Kn.SRTC and GSRTC. The average staff productivity recorded in Kn.SRTC and GSRTC are 44.79 kms. and 41.92 kms. respectively. Whereas APSRTC could achieve only 36.55 kms on average during the study period. Hence, the APSRTC should plan its operations to improve the staff productivity to the level of Kn.SRTC and GSRTC.

The operational performance of transport undertaking can better be judged on the basis of it's 'fuel efficiency'. It can be measured on the basis of "kilometres obtained per litre of H.S.D oil". Since the fuel cost is a major cost element and significantly influence the operational cost, every effort made to conserve H.S.D oil will greatly influence the financial position of the corporation. An inter-firm comparison revealed that both APSRTC and GSRTC could achieve almost the same level of fuel efficiency during the study period. Though these two corporations are getting the awards for conserving the fuel, they have to try for further improvement in kmpl.

While evaluating the "quality of service" of APSRTC, various parameters are selected. APSRTC has done a commendable job in providing adequate
passenger amenities all over the state. Massive construction of bus terminals, introduction of new services which cater to the needs of rural and urban passengers, provision of computerised services, etc., are the best examples. Inter-firm comparison revealed that the corporation could maintain low accidents rate and low breakdown rate, which is a positive sign. The low cancellations rate revealed that the corporation could succeed in shouldering the greater responsibility of carrying the scheduled trips as the figure of “actual trips operated” by the corporation has been increasing over the years. It also revealed that the corporation has been carrying it’s operations with more than 90.00 percent regularity and punctuality.

CHAPTER FOUR:

This chapter outlined the importance of adapting Decision Support System for improving operational efficiency of State Transport Undertakings in general and APSRTC in particular. The STUs have to focus their attention on resource planning, resource utilisation, constant performance monitoring, efficient vehicle scheduling, economy in personnel cost, improving staff productivity and quality of service and the STUs have to search for various alternatives to improve their performance. The best option for STUs is to undertake a massive deployment of Information Technology and designing and establishment of “Information systems” in the potential areas. DSS facilitate the STUs to analyse their physical, operational and financial data quickly and easily since the information provided by DSS form the basis for formulating and taking important strategies and decisions.
STUs need to sense and respond positively in collecting, storing and using the information which will be more helpful in identifying passenger needs and desires, monitoring the services, co-ordinating the activities and evaluating the performances for increasing overall efficiency and financial status of the organisation. The different functions performed by the top level, middle level, and lower levels of management of APSRTC and the basic data required are presented in this chapter. The top level management of APSRTC involves in policy formulation, fixation of fares, formulation of strategies to meet cutthroat competition, decision making on location of facilities, and analysis overall physical and operational performances and to take appropriate measures to increase the quality of service. Since they have to take unstructured decisions, they have to gather largely information from external sources (in addition to the internal information). Middle level managers at the depot level in APSRTC deals with tactical planning (allocating resources, decision-making on short-term objectives, strategy implementation, information dissemination, development of operational plans, etc.). The role of middle level manager is considered as very important. He has to take decision on important aspects relate to determination of fleet and staff requirements, route scheduling, service mixes, fuel efficiency and material management, analysis of crew performances, fixation of standards, etc. The lower level managers deal with allocation of duties, supplying of feedback information, motivation of operatives, performance measurement, preparation of regular reports and statements, etc.

The DSS environment reveals that the corporation needs valid information for formulating various strategies. Improvement of bus and staff
productivity, achievement of high fuel efficiency, designing of routes and schedules accurately, efforts for maintaining high regularity and punctuality, fixing the fare levels economically, and concentrate on cost control and revenue maximisation, etc., are the strategic options available to APSRTC for improving it's overall physical, operational and financial performances. For this, the corporation needs design and establishment of efficient information systems which provide information with DSS capabilities to take decisions and give pertinent solutions to various problems of thrust areas.

SUGGESTIONS:

The corporation at this stage require a qualitative change in it's approach towards improving the operational efficiency, quality of service and financial performance if it has to get success under the existing environment of ever-increasing competition from private operators who have commercial objectives only. APSRTC, as a large organisation, should consider the imperatives, ponderous problems of the business and follow the following suggestions for creating a defensible position in the long-run and for outperforming competition from the existing and future private operators:

- Evaluation of maintenance schedule should be carried out from time to time to ensure that the objectives are achieved. An effective maintenance system improves the reliability of vehicles, results in lesser breakdowns and reduces the cost of operations by increasing the life of parts of sub-assembly and the vehicle. Evaluation system, therefore, involves recording and analysis of
breakdowns to arrive at the cause of breakdowns and to initiate corrective measures. Data on breakdowns are the important feedback information to improve or modify a maintenance schedule.

To increase the “Reliability” (i) The concerned staff should be strictly instructed to adhere to time schedules as well as while making promises to passengers, and (ii) In case of any difficulty, the passenger need to be informed about the same with an explanation as well as about alternative arrangements being made.

The main weakness of APSRTC is that the cost of operation of a conventional bus is very high. For a short-distance operation of high frequency and less than 50% load, it is quite uneconomical to use a conventional bus having 55 seating capacity. The corporation may use a “mini bus” (25 or 30 seating capacity) with one man operation with the revenue incentive. If it is inevitable to the corporation to use the old age vehicle, it can use those vehicles for short distance operation. One man operation will save cost on staff. Use of old bus will have no cost on depreciation and interest. Thus the cost of operation will be reduced so that the corporation can afford to operate with less load (say 20/25 passengers) and high frequency.

The parallel operations at important nodal points enroute should be re-examined and surveyed, in order to keep proper frequency and load. Such a survey will enable to avoid unhealthy competition with in the organisation.

Frequency of buses to be increased on high traffic density routes.
- Labour productivity level should be increased by reducing bus-staff ratio and by providing incentives to crew.

- Time-tables for major routes should be published and attempts should be made to follow the time schedule.

- Effective periodical checking of clandestine operation with the help of police and Transport Authorities will certainly educate the passengers through the clandestine vehicles to switch over to corporation vehicle.

- Cancellation of trips on any account, such as late running of buses, crew reporting late at both the occasions of morning duties and at the time of crew changes or the vagaries of the operating level managers, should be avoided strictly. Low load factor should not be the criteria for cancellation/suspension of trips, which may lose credibility of the services.

- To improve the quality and reliability of the service, APSRTC need to augment it's fleet and match its services to the needs of the passengers.

- The corporation should maintain the speed and delay data which will be useful in route planning, for making the bus and crew schedules with actual running time. Without taking the actual running time and the journey speeds obtained through a survey, no effective schedule can be practically implemented.

- The management should identify the routes whose performance is falling short of break-even cost; emphasize on publicity, advertising and service promotion to induce potential customers with a dedicated drive to improve.
Design a motivating incentive scheme for the operating crew so that optimum revenue collections are ensured to facilitate expansion.

Because of the very nature and the vastness of operations even with best intentions and reasonable actions, there is always some room in STUs for complaints/grievances to arise. Such complaints are, in fact, opportunities in disguise to improve the services provided by the STUs. Public complaints in case of STUs are generally lodged through print media (newspapers), complaint books made available in buses/bus stations, letters addressed to concerned authorities, through opinions of leaders (MLAs, Journalists etc.), through telephone, meeting personally etc.

Increase or decrease of such complaints throws light on the level of public dissatisfaction on operators, crew behaviour etc. of a unit/depot. Hence a systematic collection, collation, installation and maintenance of information on complaints lodged through different means depot-wise should be ensured. Immediate remedial action should be initiated to redress the grievance and to control the damage. The complaint should be informed about the action taken to restore confidence in him on the administration and its responsiveness.

- Determination of controllable and non-controllable cost items, the rate, the level and the scope and their impact on total cost gives an idea to differentiate the cost hike adduced to either inflationary trends or to the internal organizational inefficiency. Such differentiation supports/provides the level of
concentration and achievements needed on the factors of volume of operations when the later is observed.

- Periodical performance review/appraisal among all the revenue centres (Depot)/operational unit both in physical and financial parameters and comparing them with the operational units of other STUs/corporations operating which are similar in size and comparable, focus the efficiencies and inefficiencies. When any negative variations are observed, the adoption of successful events/strategies of the efficient operational unit may be followed and the positive results can be extended for the entire organization if necessary.

- During certain crisis periods, the corporation could determine to curtail or not to increase the schedule of services. Even under the conditions of the low rate of occupancy ratio due to illegal passenger transport operations in some routes and fortify the unwillingness to increase the number of services, results passenger shift from public transport to any other alternative modes of transport and thus the corporation would suffer by loss of revenue. Measures should be taken to increase the growth in service Kms. over the years rather than curtailing the same gives hope to the passengers that adequate services are provided and impress them to feel STUs bus as ideal mode and results no further shift.

- Passenger feedback is to be periodically obtained in a systematic manner on the operations as well as on the amenities provided in bus stations. Different
instruments should be designed for these purposes to measure the level of passenger satisfaction on each service operated by a depot and the amenities provided at each bus station.

Passengers should be informed through all conceivable methods and media about the different facilities/concessions offered by the corporation in different packages. The present system of displaying time table charts in the main bus-stations, answering queries across the enquiry counters and publishing time table books is grossly inadequate. Route-wise small and pocket size time-tables on all routes, should be published and supplied free of cost or at a nominal rate. Displaying/announcing cancellation/curtailment of scheduled services should be meticulously executed. Updating the published/displayed time-tables should be taken up with missionary zeal.

Optimisation of productivity of vehicles and employees will result in maximising the earnings and minimising the cost of operations in the corporation. These twin objectives can be achieved by adequate motivation of employees. Productivity maximisation, motivation of employees, cost effectiveness, etc., can be achieved by suitable manpower norms, efficient layouts, system improvements and incentive schemes. Extending both financial and intangible incentives to the staff improve the productivity and profitability of the corporation.

The corporation should relook at it's present performance appraisal system. A development oriented appraisal system will help the organisation in assessing
the strength of its employees in terms of skills, knowledge etc., and identifying the gaps which may be bridged in order to face the challenges of competition. This will not only help the corporation in building up effective manpower, but will also help individual to enhance his capabilities and potentialities in extending quality service to the needy.

It is now finally apparent that APSRTC has no monopoly. It has to operate its buses alongside other competitors and financially viable. It needs innovativeness, creativity and superior managerial ability to achieve the challenges that are waiting at its doorstep. The survivors will be those who understand and adapt to the changing environment and retain and acquire the goodwill not only of their passengers but of the Government and the society at large. These words are also applicable to APSRTC.

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