CHAPTER - 1

INTRODUCTION
CHAPTER - 1

INTRODUCTION

An efficient transport network is a crucial infrastructure in the socio-economic development of a country. Economic and commercial importance of the greatest magnitude is, now-a-days, attached to the development of transport. The transport industry, which undertakes nothing more than the mere movement of persons and things from one place to another, has contributed to the most important activities of men in every stage of advanced civilization. In fact, the whole structure of industry and commerce rests on the well laid foundations of transport.¹

Transportation touches so many fringes of the economy. Its service is so important to modern economy that it may not be much to say that just as the human legs have made the human body mobile, so transportation provides legs to the various economic activities and makes the whole economic mechanism mobile.²

India is a very vast country with an area of 32.76 lakh square kms and more than 70% of the population lives in 5.68 lakh villages scattered far and wide.³ Road passenger transport is essential for the economic development

of the country. Vast areas of hinterland especially the villages in the backward
districts, hilly areas, tribal areas, etc., would be difficult of access, if there is
no adequate passenger road transport. Recognising the importance of
passenger road transport as an important public utility service and a basic
infrastructure for economic and social development, the Government of India
(GOI), immediately after the independence, passed a legislation in 1950 for
the formation of Road Transport Corporation (RTC). This Act aimed at the
formation of the State level public sector road transport corporations (SRTCs)
and providing an adequate, efficient economic and well co-ordinated road
transport services to the travelling public.4

SRTCs play a significant role in the social and economic development
of the country. They render vital transport services adequately and
economically and exert the necessary unifying social and cultural influence
over the diverse sectors of the economy. At present, there are 69 SRTCs in
India, accounting for almost 35% of the total passenger bus transport operation,
moving over 60 million people throughout the length and breadth of the
country, compared to 11 million passengers carried by Indian Railways. The
investment in the SRTCs has also grown proportionate to this expansion over
this period. The paramount role of the movement of men and material over
far flung areas has to be taken care of by the SRTCs. The SRTCs are, therefore,
called as instruments of "public good".5 The Karnataka State Road Transport


5. Man Mohan Singh - Role and Rationale of STUs, Journal of Transport Management,
Corporation (KSRTC) is one of such SRTCs which has been doing a great service for the cause of public good all along the commitment to the economic viability in its operation.

Karnataka State Road Transport Corporation (KSRTC) and Economic Development of Karnataka:

Karnataka State Road Transport Corporation (KSRTC) is one of the public sector undertakings, providing bus services to cater to the needs of the travelling public in the State of Karnataka. It is playing a pioneering role of bringing in-accessible area and rural areas into the main stream. This is now the third biggest corporation among the nationalised undertakings in India. It was started with an objective of providing passenger transport services to meet the requirements of reasonable travel facility, linking hinterland with urban areas with affordable transport services to poor and other sections of the societies, etc.

KSRTC plays a decisive role in the economic development of Karnataka. It not only provides bus services to urban areas, but also to the remote rural areas of Karnataka. It also extends its services to the five neighbouring States, viz., Maharastra, Andhra Pradesh, Kerala, Tamilnadu and Goa. It caters to the needs of inumerable people daily throughout the length and breadth of the state during 1996-97 with a fleet of 10301 buses.

It is worth mentioning that the corporation provides employment for thousands of people and render social services. It renders essential services
to the students, senior citizens and handicaps at a concessional rate. It also provides the most important source of revenue for the State Government. Thus it contributes significantly to the development of the State.

Need for the study:

KSRTC is one of the public sector undertakings, providing bus services to cater to the needs of travelling public. It has grown to a large size and enlarged its services to carry out smoothly and efficiently in the transport system. Now, it is running under continuous losses. Inflexible fares, rise in the prices, running the buses on uneconomic routes, high level of taxation, imposition of concessional fares and high interest burden are responsible for the increase in both the capital and operating costs.6

The corporation, now-a-days, has failed to provide adequate bus services to meet the needs of the growing population. This has led to dissatisfaction among the general public especially where the entire area is nationalised.7 The rate of growth in the fleet strength has come down to 0.7 in the year 1996, which is very less than the rate of growth in the commuters.

The general impression in the minds of the public about the services rendered by the KSRTC is that, the crew lacks courtesy, large number of breakdowns occur, hence there is no reliability, punctuality is at discount,

waiting time is more and operations erratic; hence there is no co-ordination; the corporation is incurring loss, hence; it should be inherently inefficient; therefore, quality of service is poor and the corporation has become a dead weight to the society at large.  

Moreover, the corporation has also grown to a gigantic size due to the absence of alternative transport system. The increase in the size of the KSRTC had posed many problems such as problems relating to the personnel administration, etc. This has an effect on the operational performance of the corporation.

The corporation is also facing with the problems of lack of resources, lack of support from the State as well as Central Government in formulating appropriate policies. Lack of proper understanding and appreciation of the problems by the management deserves the attention of the policy-makers, administrators and academicians.

Therefore, a need was felt by the researcher to analyse the operating performance of the KSRTC for a selected length of time.

Statement of the Research Problem:

The KSRTC, which raised high hopes in the minds of travelling public when it was started, is now being criticised sharply by the same

The corporation is functioning under severe financial constraints due to a number of reasons and factors which include both controllable and uncontrollable, and both internal and external. One of the reasons for this precarious financial situation is its inability to earn adequate revenue from the traffic operations to cover the entire operating cost and to earn fair return on investment.\textsuperscript{11}

This poor return on investment is not only the effect of poor operating performance and financial performance but also will be the cause for poor financial soundness of the corporation in due course of time. If adequate measures for diagnosing its operating and financial health are not made, its very existence will be shaky. Therefore, a study which aims at examining operating performance in terms of cost variables and financial variables assumes a special significance. Hence, the statement of the problem:

"OPERATING PERFORMANCE OF THE KSRTC: A CRITICAL STUDY"

Objectives of the study:

The main objectives of the present study are:

1. To study the growth and development of the Karnataka State Road Transportation Corporation.
2. To analyse the operating profitability.
3. To analyse the composition of operating cost and its effectiveness.
4. To examine the capacity utilisation.
5. To appraise the productivity of different input factors such as manpower, material etc.
6. To trace out the reasons for poor operating performance.
7. To offer suggestions for improvement in the performance of the KSRTC in particular and other SRTCs in general.

Sources of Data:

The study is primarily based on secondary data. The data required for the study was collected from the following sources:

1. Administration Reports of the KSRTC for the period from 1990-91 to 1996-97.
2. Profile and performance of STUs published for the Association of State Road Transport Undertakings (ASRTUs) by the Central Institute of Road Transport (CIRT), Pune.
4. Data Published by the Planning Commission, Government of India for the study period.

Besides the secondary data, the researcher has collected primary data also through personal discussion with the KSRTC staff.

Scope of the study:

The study is undertaken to analyse critically the operational performance of the KSRTC as a whole, which renders transport services in the State of Karnataka. The present study confines only to the aspects such as physical and operational performance, financial performance, material and manpower productivity and profitability.

The study covers the critical evaluation of operational performance of the KSRTC for a period of 7 years from 1990-91 to 1996-97.

Research Methodology:

The data collected from both primarily and secondary sources, have been properly analysed with the help of ratio analysis, trend analysis, etc. The detailed procedure for evaluating the performance in different aspects of
working of the corporation has been enumerated at the appropriate places in the respective chapters of the study.

**Review of Earlier Literature:**

The review of literature plays a crucial role in establishing back drop for any research work. It is a fact that, justification of the present study can be clarified by reviewing the available literature on the subject to find out the gap of the research study.

Jain, J.K. (1973) in his work on "Transport Economics" has focussed on the development and regulation of motor transport in India during the pre-independence period and the plan period.12

S.K. Shrivastava (1983) has made an attempt to study the significance and development of transport. In his work on "Transport Development in India", he also made an attempt to study the growth of transport before and after industrial revolution.13

Khan R.R. (1980) in his study on "Transport Management" focussed on financing of roads and road transport.14

Singh N.P. (1989) has made a scholarly study on the financial management in State enterprises, a case study of Bihar State Road Transport

---

Corporation (BSRTC). In his study, he made an attempt to analyse the overall performance of the BSRTC.15

Gundam Rajeswari (1998) in her research work on "Public Sector Performance of State Road Transport Corporation - A Case Study of APSRTC" has made an attempt to analyse the operational performance and pricing of the APSRTC.16

Hanumantappa K. (1976), in his thesis, made a research study on pricing, investment and planning of road transport with special reference to the KSRTC. He focussed his attention on the investment and planning of the KSRTC.17

Raju T.V. (1991), in his research studies, focussed on financial management in road passenger transport with special reference to the KSRTC. It highlights the financial performance, working capital management and management of fixed assets of the KSRTC.18

Mathew P.W. (1983), made a research study on material management in STUs in India. This study emphasised on the stores management of STUs with special reference to Kerala SRTC.19

---

Sastiy E.S. (1975), in his thesis, "Physical and Financial performance of some state RTUs in India" - made a study on the operational and financial performance of SRTUs. 20

Dr Madegowda J. (1989), has made a research study on "Investment pattern and profitability of the KSRTC" and analysed the profitability, investment pattern, pricing and the operational performance of the KSRTC. 21

A study conducted by the Expert Technical Committee on the Re-organisation of the KSRTC (1992), has focussed on the performance and restructuring of the KSRTC. The committee in their report made certain recommendations for the improvement. 22

Thus, the review of research studies, undertaken in the field of RTUs, reveals that no study has been undertaken so far with an objective of X-raying the operating performance and tracing out the causative factors for poor operational efficiency and poor financial profitability. Viewed from this angle, the present study, which is a regional study confining to the KSRTC, is quite distinct from earlier studies in the field.

Research Design:

The study has been arranged in eight chapters:

1. **INTRODUCTION**: The introductory chapter projects the significance of road transport, the role of STUs in the economic development of India in general and the role of KSRTC in the economic development of Karnataka in particular. Besides, this chapter deals with the need for the study, scope of the study, research methodology, objectives of the study research design, review of literature and the concepts used in the study.

2. **KSRTC : A PROFILE**: The second chapter deals with the brief history of the KSRTC, its growth, organisation, investments and operational highlights over the years.

3. **ANALYSIS OF RETURN ON INVESTMENT**: The third chapter highlights the picture relating to the ROI of the corporation under study.

4. **APPRAISAL OF FINANCIAL PERFORMANCE**: In the fourth chapter, the analysis of financial performance is made.

5. **ANALYSIS OF OPERATING PERFORMANCE**: The fifth chapter aims at X-raying the operational performance of the corporation under study over the years.
6. ANALYSIS OF COST AND EFFICIENCY OF STORES: The sixth chapter is devoted to the study of cost effectiveness in utilising the stores of the corporation.

7. ANALYSIS OF MAN-POWER PRODUCTIVITY: The seventh chapter presents an appraisal of man-power performance of the KSRTC.

8. FINDINGS AND SUGGESTIONS: The last chapter deals with the findings and suggestions for the effective operating performance of the corporation under study.

Concepts used in the study:

1. Capital Invested: It is a sum of capital contributions from Governments and long-term loans including fixed deposits from public and free reserves including accumulated profits (Less accumulated losses to the extent these have not been adjusted).

2. Capital Employed: Capital employed is the sum of fixed assets net of depreciation and the net working capital.


4. Bus Utilisation: It is defined as kilometres done per bus on road per day. It is calculated with the following formula:
Average Bus utilisation = \[ \frac{\text{Total Effective kms. done per day}}{\text{Total buses on road on that day}} \]

5. **Bus Productivity**: It is defined as kilometres done per bus held per day. It is calculated as:

\[
\text{Average Bus productivity} = \frac{\text{Average Effective kms. done per day}}{\text{Average number of buses held per day}}
\]

6. **Manpower Productivity**: It is the total effective kilometres operated for a period divided by total man days paid for.

7. **Crew Productivity**: It is computed as:

\[
\text{Crew Productivity} = \frac{\text{Effective kms. operated per day during the period}}{\text{Total number of crew days paid for}}
\]

8. **Fleet Utilisation**: Fleet utilisation is the percentage of number of buses on road to buses held by the unit. It is calculated as:

\[
\text{Fleet utilisation} (\%) = \frac{\text{No. of Buses on Road}}{\text{No. of Buses held}} \times 100
\]

9. **Load Factor**: Load factor is the percentage of passenger kilometres to capacity kilometres. It is also defined as the percentage of actual passenger earnings to expected passenger earnings at full load including standees allowed.
10. **Occupation Ratio**: Occupation ratio is the ratio of passenger kilometres to seat-kilometres offered.

\[
\text{Occupation Ratio} = \frac{\text{Passenger kilometres}}{\text{Seat kilometres offered}} \times 100
\]

11. **Passenger Lead**: Passenger lead is defined as the average length of journey performed by passengers.

\[
\text{Passenger Lead} = \frac{\text{Total passenger kms. occupied}}{\text{Total No. of passengers carried}}
\]

12. **Operating Ratio**: It is defined as the percentage of the operating cost to the total traffic revenue.

\[
\text{Operating Ratio} = \frac{\text{Total cost} - (\text{Interest+Taxes})}{\text{Traffic Revenue}} \times 100
\]

13. **Punctuality**: This is the percentage ratio of scheduled trips arrived on time to total No. of scheduled trips actually arrived.

   a) **Punctuality in Arrivals**: It is calculated as

\[
\text{Punctuality in Arrivals} = \frac{\text{Total No. of scheduled trips actually arrived} - \text{All late arrivals}}{\text{Total No. of scheduled trips actually arrived}} \times 100
\]

   b) **Punctuality in Departure**: It is calculated as

\[
\text{Punctuality in Departure} = \frac{\text{Total No. of scheduled trips actually departed} - \text{All late Departures}}{\text{Total No. of scheduled trips actually departed}} \times 100
\]
14. **Retradability Factor**: Retradability factor is defined as the average number of retreads obtained per tyre before finally scrapped.

15. **Return on Capital Employed**: It is calculated as -

\[
\text{Return on Capital Employed} = \frac{(\text{Net Profits} + \text{Interest paid on capital} + \text{Interest paid on short and long term loans} - \text{Interest earned on Investments})}{\text{Capital Employed}} \times 100
\]

16. **Return on Capital Invested**: It is computed as -

\[
\text{Return on Capital Invested} = \frac{\text{Net Profits} + \text{Interest paid on capital and long term loans}}{\text{Capital Invested}} \times 100
\]

17. **Staff Ratio**: It is calculated as -

\[
\text{Staff Ratio} = \frac{\text{Total Staff}}{\text{Average No. of busses on road}}
\]

18. **Schedule**: A schedule is the programme of operation of a bus on one or more routes operating one or more trips within 24 hours.

19. **Route**: A route is a line of travel between two terminal points of a regular service in operation.

20. **Passengers kilometres performed**: It represents the volume of traffic in terms of carrying capacity kilometres actually occupied. It is the sum total of the length of the journey performed by all the passengers carried.
Traffic Revenue

\[
\text{Passenger kms.} = \frac{\text{Traffic Revenue}}{\text{Fare per kilometre}}
\]

OR

\[
\text{Passenger kms.} = \text{Seat kilometres} \times \text{occupation ratio}
\]

21. **Average no. of buses held:** Average number of buses held during any period is calculated by adding together the number of buses everyday in that period and dividing the total number of bus days so arrived at the number of days in the period.

22. **Fleet:** Fleet represents the total number of buses held at a particular point of time. The buses held by the corporation may belong to any one of the following categories:
   a) Buses on road
   b) Buses held as spares
   c) Buses in workshops
   d) Buses awaiting scrapping
   e) Buses in transit.

23. **Average carrying capacity:** It is calculated as -

\[
\text{Average carrying capacity} = \frac{\text{Total seating capacity for all the buses} + \text{Total standees for all the buses allowed}}{\text{Total No. of buses on road}}
\]

24. **Seat kilometres offered:** It is computed as -

\[
\text{Seat kilometres offered} = \text{Average carrying capacity} \times \text{Effective kilometres operated}
\]
25. **Effective kilometres**: Effective kilometres is the kilometres actually covered by all the buses of the corporation for the purpose of earning revenue during any specified period.

26. **Dead kilometres**: These are the kilometres covered by the buses of the corporation under the following circumstances:

   i) Movement between bus-stand and depot and vice-versa.

   ii) Movement from bus-stand and depot to the fueling point and back.

   iii) Movement of buses as relief in case of accident and breakdown.

   iv) Movement of buses sent to continue the operation of breakdown or accident bus upto the breakdown or accident point.

   v) Movement of buses sent to start operations from some other depot or operating point.

   vi) Movement of buses sent to the point of repairing and reconditioning, not on schedule.

   vii) Movement of buses for testing purpose.

   VIII) Movement of buses for departmental use.

27. **Gross kilometres**: It is the sum of total of effective kilometres and the dead kilometres covered by the buses of the corporation.

28. **Vehicle on Road**: A vehicle which is operated for effective kilometre is a vehicle on road.
29. Owners' Funds: Owners' funds refer to the capital investment made by both Central and State governments. It constitutes both equity capital and capital contribution.