CHAPTER -II

THE FRAMEWORK OF RESEARCH

This chapter aims to draw the research design and comprehensive plan of the study. It has helped the researcher to complete the study effectively. It is a study of one of the public sector State Road Transport undertaking (SRTU) out of 71 SRTU's in India. It may be considered that business phenomenon is similar and reproducible and all the SRTUs face more or less the same type of environment. Hence, the unit (H.R.T.C.) is studied as a whole.
Research is a part and parcel of any systematic knowledge. It has occupied the realm of human understanding in some form or the other from times immemorial. The human urge for new areas of knowledge has developed a faculty for search and research in him. The scanty way of search in the past has achieved an evolution to the more judgement areas of operations research, through analytical and scientific methods of investigation. Research has now become an integral part, not only of academic pursuits, but also of all the areas of human activity. Sociologists, economists, physical scientists, natural scientists and nuclear scientists—all would advocate an extensive use of research for the sake of their academic advancement, while practitioners like industrial engineers, physicians, surgeons, managers and businessmen emphasise the great utility of research in their day to day decision making. Even in agricultural and religious pursuits, research plays a very vital role. To be precise, no academic body of knowledge and no functional area of activity would progress without adequate advancement in terms of research.

It would not be an exaggeration to say that the 20th century has witnessed a rapid growth in the size and complexity of human organisations. Industrial and economic activities in India in the latter half of this century have achieved unprecedented dimensions. The size of modern business indicates that managerial and administrative decisions can affect vast quantities of capital and large number of people. Mistakes can be tremendously costly, and a single wrong decision may require years of rectification. Moreover, decisions are needed to be quicker than even before. Both postponement of decisions and wrong decisions would be costly, which can give an added advantage to the competitors. Trial and error methods cannot be appreciated and decisions are to be accurate and timely, and should be based on facts and realities. It is in this context that business decisions are now tremendously influenced.
Research is the process of systematic and in-depth study or search for any particular topic, subject or area of investigation, backed by the collection compilation, presentation and interpretation of relevant details or data. It is a careful search or inquiry into any subject or subject matter, which is an endeavour to discover or find out valuable facts which would be useful for further application or utilisation. Research may involve a scientific study or experimentation, and result in discovery or invention, which would aid either scientific development or decision making. It may be concerned with general, abstract, or concrete subjects. There cannot be any research which does not increase knowledge or improve scientific know-how.

A proper statement of the research problem is the primary step in any research design. An academic research problem is based on academic interest, while a managerial research problem is based on management practice; and any managerial research problem is based on management practice; and any managerial research is designed to aid managerial decisions. Managerial research recognises organisational goals, identifies operational and functional objectives and constraints, recognises relationships between relevant variables, make use of scientific method, and suggest solutions to the problems. In other words, a research problem in the realm of management is closely associated with organisational goals, operational and functional areas, corporate plan and strategy, and the company's strengths, weaknesses, opportunities and threats in the context of its interaction with its environment.

2.1 STATEMENT OF THE PROBLEM:

In today's world, the whole structure of commerce and economic
development and mobility in a society rests with well laid foundations of and transport. In general, the transport is recognised as a key infrastructural input for socio-economic development. The development of suitable road and transport facilities become sine qua non not only to industrial economic development but also to the existence of the community in modern age of growing interaction and mobility.

Road transport is one of the most promising and potent mean, suitable for short and medium distances. It provides basic infrastructure for bringing the majority of people, who are living in far-off villages into the mainstream of national life by connecting them with different places. It offers a number of advantages such as flexibility, reliability, speed and door to door service, besides supplementing and increasing the efficiency of the other modes of transport. It has a vital role in the opening up of interior and remote areas and is relatively cheaper and less capital intensive.

The dawn of independence and the winds of social change that swept the entire country gave birth to new ideas and new thinking. The implicit acceptance of the philosophy of a welfare state produced two industrial policy resolutions laying down strategies for the nascent republic and spelling out its priorities for nationalisation. Road transport found place in the 1956 Industrial Policy Resolution under schedule B, which earmarked for progressive nationalisation. However, between the two Industrial Policy Resolutions of 1948 and 1956, the Indian Parliament enacted the Road Transport Corporation Act, 1950 and enabled the States to form corporations for progressively taking over the bus transport in their respective areas.

A big span of fifty years had lapsed. We are bidding farewell to 20th century in a millennium year and excitedly looking at the 21st century owing challenges to STU's of technology, quality of service to customers,
increasing competition from private operators so on and so forth.

It is said that the darkest hour is just before dawn. STU’s might, yet, like the phoenix, rise from their ashes. This can happen if they redefine their strategies and provide marketable services not on a monolithic average basis as they hitherto have been doing but on feeling the pulse of the travelling public region wise, even district wise, and offering the type of buses and services that the public demand and can pay for. If there is nothing unofficial about the government’s yet undeclared policy of indifference to state transport, let there be a strong response that STU’s can exit as commercial enterprises which still have the interests of the public at heart.

In fact, transport services bear a hybrid character of both infrastructural inputs and public utility services. H.R.T.C., an STU’s is trying to cope with them since 1974 with the motto 'conscious devotion to duty and humble service', the endeavour of the corporation is to provide trouble free, timely and better bus service to the people including those residing at the remotest corners of the State and to achieve these objectives through proper maintenance, upkeep of vehicles and timely servicing etc. Moreover, the performance of H.R.T.C. depends upon multitude of factors socio-economic, financial, political or organisational etc., and all is not going well.

2.2. RATIONALE OF THE STUDY:

The rationale of studying the organisation and management of road transport in Himachal Pradesh arises because it is the most vital component of the States economy, without which the economic activities shall come to hault. Himachal being a hilly state, where the roads are continually climbing and descending has no other modes of mechanised transport such as railways, waterways and airways etc., or which are almost
negligible in the Pradesh. Himachal exhibits critical dependence on road transport for economic, social and industrial growth. Roads connect the production areas with the market centres, supply of essential commodities, marketing of horticulture produce and optimum utilisation of various potentials at remotest areas whether for tourism and power potential. Moreover, Himachal is an industrially backward state, operation and maintenance of well geared transport machinery becomes prerequisite for industrial growth and economic prosperity. Besides this, Himachal Pradesh has also got a vast potential for tourism.

Himachal Road Transport Corporation is a State Transport undertaking to facilitate passenger road transport in the State. Its working directly influences the transport and other industries, because it serves as an engine of economic growth. Moreover, this organisation has been catering to the masses/public of the state for more than 25 years which is a significant time period and shall provide proper feedback to the system. Since, H.R.T.C. has been viewed as a 'System', and this do not work in an isolation, it has inputs, outputs, transformation, internal and external environmental elements, therefore it needs wholistic analysis and scanning. Available literature on transport system also depicts that not much has been researched in this field. All these factors contributes to the rationale of the study.

2.3. HYPOTHESIS:

1. Organisation and management of H.R.T.C. depends not only on its organisational elements but also on environmental factors, which can only be understood, in its totality by system analysis.

2. The inputs and outputs of a transport system do not match properly, thereby create gaps and dissatisfaction.
2.4 OBJECTIVES OF THE STUDY:

1. To discuss the organisation and management of H.R.T.C. as a transport system.
2. To make the systemic study of H.R.T.C. in terms of its goals and objectives and their impact on environment.
3. To study the impact of internal and external environment on the output of H.R.T.C.
4. To suggest the measures for improving the organisation and management of H.R.T.C. in the view of its outputs as a transport system.

2.5 NATURE AND SOURCES OF DATA:

In order to make the systemic study of H.R.T.C., the primary information had been collected from the persons and agencies concerned with H.R.T.C. We have drawn following questionnaires:

i. Questionnaire for commuters/passengers of H.R.T.C.
ii. Questionnaire for commuters/Passengers of private road transport bus.
iii. Questionnaire for the employees of H.R.T.C.
iv. Questionnaire for private road transport bus owners.

In addition, personal interviews and discussions are arranged with the people concerned at various points of time.

The organisation and management of road transport in Himachal Pradesh in general and H.R.T.C. in particular will be studied by means of data and statistics collected from various agencies like Planning Commission, New Delhi; Central Institute of Road Transport, Pune; Association of State Road Transport, Delhi; Directorate of Economics and Statistics, Govt. of H.P. Shimla; Department of Institutional Finance, Finance Department, H.P. Govt; Administrative Reports of Department of Transport,
Annual Reports of H.R.T.C; proceedings of various committees of Parliament and State legislature. The review of articles from various journals, magazines and dailies have been made in the general assessment of the organisation. Indian Journal of Transport Management published by the CIRT for the ASRTU is subscribed during the course of research to be in touch with the day to day changes in the transport service industry. All this primary information and data had facilitated the systemic study of the organisation and management of H.R.T.C.

Conceptual aspect is based on secondary data. The system approach in organisation and management has been chosen to be used, therefore, the available books on the subject have been consulted and reviewed. The relevant published material has also been reviewed at appropriate places to make this study more comprehensive.

2.6 METHODOLOGY:

A proper and systematic research methodology helps us to achieve the basic objectives of the study, its importance and identification of its problems.

The whole data and facts collected are to be analysed and interpreted in an integrative manner within a framework of system approach because H.R.T.C. has been considered here as an open transport system interacting with its internal as well as external environment. In order to study the organisation and management of H.R.T.C. in terms of its outputs, the specific indicators with some parameters in view are to be judged and calculated as follows:

i. The physical output is analysed with the help of following parameters.
   a. Fleet Utilisation.
   b. Vehicle Productivity.
c. Bus Staff Ratio.
d. Staff Productivity.
e. Fuel Efficiency.
f. Occupation Ratio.
g. Load Factor.

All these parameters have been calculated quantitatively with the help of formulae stated in the compendium of Transport Terms (1997) published by Central Institute of Road Transport, Pune.

A comparative analysis of H.R.T.C. has also been made with Rural STUs, Hill Region STUs, Urban STUs and Total STUs, as per the figures published in State Transport Undertakings Profile and Performance Facts 92-93 to 98-99 published for ASRTU by CIRT Pune.

ii. The Financial output is analysed with the help of following parameters.

a. Capital Structure.
b. Cost Structure, and
c. Revenue Structure.

All these parameters have been quantified, tabulated and analysed, with the data taken from State Transport Undertakings Profile and Performance Facts 1998-89 to 1998-99 published for ASRTU by CIRT Pune. Moreover, the sub-parameters like cost per kilometre (CPKM), Total cost per bus held, Total cost per bus on road, Earnings per kilometre (EPKM) Earning per bus held, Earning per seat kilometre, Analysis of operating Margin, Analysis of operating ratio, Analysis of net margin etc., with the help of formulae provided in compendium of transport terms (1997) published by CIRT, Pune.

Here also a comparison of H.R.T.C. with different categories of STUs is done.

In order to examine the physical and financial performance of
H.R.T.C, a rate of growth of some of the parameters is also calculated with the help of compound rate of growth formula by using the following exponential relationship:

\[ y = AB^T \]

Where \( y \) = the variable for which compound rate of growth is calculated.

\( T = \text{Time} \)

After taking logarithm of both sides it becomes as:

\[ \log y = \log A + T \log B \]

Then, by solving this equation with the help of least square method, the rate of growth is derived by the relation as follows:

\[ r = B - 1 \]

(Compound rate of growth)

iii. The quality of service is analysed with the help of secondary data published by CIRT Pune keeping in view the following parameters:

- a. Accidents.
- b. Breakdowns.
- c. Regularity
- d. Punctuality.

These parameters are operational oriented.

iv. The commuters satisfaction is judged from the analysis of questionnaire framed for commuters/passengers. A sample of hundred (100) was drawn at random covering various categories of people from different walks of life as passengers and further dividing them into two broad categories as casual road transport passengers and daily passengers (commuters), to know their attitude concerning various parameters. The parameters analysed in quality of service with operational orientation have also been analysed with consumer orientation here.
As all the organisations are being incorporated and run by human beings for human beings. Their satisfaction is significant for the achievement of organisational mission or purposes. If they are dissatisfied, their dissatisfaction shall have a bearing on the output of the organisation and will function as an internal constraint of the system. Therefore, their perception is to be judged and analysed in a systematic manner. For this purpose a detailed questionnaire along with supplementary questionnaires have been drawn with the sample size of 100 for the employees of H.R.T.C. working at different levels and of various categories. Supplementary questionnaires have been drawn for workshop and running staff i.e. for (i) Drivers (ii) Conductors (iii) Inspectors and (iv) Technical/Workshop staff.

(v) In order to analyse the impact of large scale privatisation upon the outputs of a Transport system, an initiative was intended to make comparative analysis of different indicators pertaining to H.R.T.C. and Private operators. But in the absence of exhaustive data on the physical and financial performance of the private operators it is not possible at this juncture. Therefore, two more semi-structured questionnaires have further been drawn for (i) Private Road Transport Bus owners and (ii) Private Road Transport Bus Passengers/commuters with a sample size of 100 each so that some ideas are drawn, formulated and conceptualised pertaining to the privatisation of passenger road transport in Himachal and then to study its impact on a vibrant leader H.R.T.C. providing organised passenger transport service in the state.

(vi) Public opinion about the different aspects of the day to day operations of H.R.T.C. is published daily in the news papers. This is also the reflection of different parameters of quality of services. These have been preserved from the newspapers as cuttings and clippings about H.R.T.C. in order to supplement the views of passengers, employees, private bus
operators etc. It shall also serve as a feedback to the transport system.

2.7. LIMITATIONS AND SCOPE OF THE STUDY:

The study is analytical in nature and of methodological character. First, the analysis of H.R.T.C. as a transport system, therefore, poses a theoretical problem as comprehensive and precise delineation of its various components may not be possible. Secondly, the mathematical, statistical and accounting applications have been made in a restrictive manner and at places as specified in research methodology. Thirdly, the impact of external environment on H.R.T.C. and Vice versa is subjective and qualitative in nature which defies mathematical treatment. Every efforts have been made to make the study comprehensive and up to the point as per research design.

2.8. SCOPE FOR FURTHER RESEARCH:

No one can put restraint on knowledge and can not claim any study exhaustive. In an era of integration of disciplines or interdisciplinary approach, one study opens the scope for the other. Here we have made a systemic study of a transport organisation by applying system approach. There are more than 70 organisations in the public sector providing transport service to the masses. A comparative study may be initiated amongst the Hill Region STU's. At the bigger stage the whole transportation activity i.e. passenger, freight and others may be studied collectively by considering it as a large system which will bring out the functioning, prospects and constraints of a mega transport system.

2.9 CONTRIBUTION TO THE FIELD OF KNOWLEDGE:

i. A transport organisation is being studied with system as methodology.
ii. To understand the concept and growth of road transport in India as well as Himachal Pradesh.

iii. Review of literature on 'Transport System'

iv. Delineation of elements of an open transport system to understand applied concept of system approach.

v. Identification of environmental factors of an open transport system and their impact on each other.

vi. Identifying the thrust areas in the functioning of H.R.T.C.


viii. Public opinion about the system.

ix. Impact of privatisation on the outputs of the system.

x. Suggestions and Recommendations for the improvement of a system.
REFERENCES


2. Ibid., p.1.

3. Ibid., p.2.

4. Ibid., p.25.
