CHAPTER ONE
INTRODUCTION
CONTENTS

1.1 Transport System: Scope and Importance
1.2 Types of Transport Systems
1.3 Transport Management: A Systems Approach
1.4 Problems of Transport System in general and Managemental Studies in particular
1.5 Research Problems
1.6 Objectives of the Research Study
1.7 Hypotheses of the Research Study
1.8 Delimitations of the Research Study
1.9 Conclusive Aspects
CHAPTER PLAN: QMS

1. SCOPE AND IMPORTANCE
   1.1. TRANSPORT SYSTEM
   1.2. TRANSPORT MANAGEMENT
   1.3. PROBLEMS GALORE
   1.4. RESEARCH PROBLEM
   1.5. OBJECTIVES
   1.6. LIMITATIONS
   1.7. HYPOTHESES
   1.8. CONCLUSIVE ASPECTS

2. TYPES
   1.2.

3. THEORY
   4.

4. PRACTICAL
   4.
1.1. **Transport System: Scope and Importance**

The word "transport" has been derived from the Latin word "transPortare". "Trans" means across or the other side and "Portare" means "to carry". Transport, thus, means to carry to the other side or from one place to another.

The transport system as we know it today has evolved as mankind has developed. Man instinctively desires, comfort and therefore, in his quest to find it, it has searched for ways and means to lessen labour in doing whatever he has had to do. As human beings, from ancient times to the 20th century, sought to make their transport facilities more efficient, they have always endeavoured to move people and property with the least expenditure of time, efforts and cost. Improved transportation has helped to make possible progress towards better living, the modern systems of manufacturing and commerce, and this complex, interdependent modern economy present in much of the world today. Without transportation, there could be no trade, without trade, there could be no towns or cities. Towns and cities are traditionally the centres of civilization. Therefore, transportation helps make civilization Possible.

In a highly civilized society, people would be able to develop their own skills and
market their products. Transport, therefore, plays a crucial role in the economic life of the community, and is essential if what is now regarded as an acceptable standard of living is to be maintained. Its importance is such that if normal commercial operations can no longer support the required facilities, there is a case for subsidisation and transport then comes to be regarded as an essential SOCIAL SERVICE. Therefore, the transport industry cannot escape the attention of national and local governments.

A nation's political development and success, both in peace and war, are rather directly tied to the transportation facilities available in that nation. Throughout history a nation's political unity and power to govern have varied with its success or failure in providing some measure of transportation. Since earliest times, the function of transport could be broadly be classified with three categories

a) Economic
b) Social and cultural
and c) Military

Transportation facilities have also had political significance as modern nation have provided their citizens with Acts, Regulations and Rules.
Increased urban transportation, recently from increased commercial traffic and increased commuter travel to and from cities, has caused such problems as increased congestion, pollution and damaged to road surface and such things.

The current emphasis on energy conservation and the environment represent an opportunity and a challenge for tomorrow's transportation.

As an attempt in this direction, "Managemental Studies in Road Transport System", has emerged recently as a subject --- a new branch of knowledge. The current research is on of its facets.

1.2. TYPES OF TRANSPORT SYSTEM

Transport is used in all modes of life. It is practically impossible to find any feature of life or mode of activity that does not depend on transport. Modern transport has been mechanised and is complex. It has been the outcome of scientific invention, advance and progress. It could broadly be divided into certain specified divisions, namely, transport by road, rail, sea inland waterways, air etc. Each of these modes of transport has its own advantages and contributes to the nation's life and prosperity. Large numbers of persons are employed in the operation and administration of each division of
transport. The division of transport in various groups according to the means and area of operation tends to give an impression that each one of these has an independent entity and has nothing in common with one another. A study of all these divisions discloses that while they may appear to be independent, they are in fact basically related in their elements.

The different modes of transport may be parallel or competitive to one another. One should make an attempt to co-ordinate them as far as practicable, in the larger interest of the community.

While the development of road transport had practically been static up to a certain period which more or less coincided with the termination of the first world war, its development after that period can well be said to be Spectacular, considering that India has so far been a non-manufacturing country and that it was exploited to a large extent as a market for the vehicles manufactured in foreign countries. Its development though remarkable in the last several years, yet it is not achieved "The self-sufficiency" objective from the national point of view. In this context, it is necessary to mention the road development plans which the government of India has formulated.
Much has been said on the subject, for and against the plans. While the plans may seem ambitious, experts have drawn attention to the comparatively slow progress which has been made in road development, urban areas in particular. In fact, there will be a vicious circle of road and vehicle deterioration, unless action is taken as suggested by so many experts to step up the road development plan. The current research has visualise a new dimentional outlook as a panacea for all these evils, expressed in terms of modern managemental programme.

1.3. TRANSPORT MANAGEMENT : A SYSTEMS APPROACH

Historically when reviewed, the oldest form of transport, was going from place to place on foot. In primitive ages, goods had been carried on head or shoulders. Later, when man was able to tame animals, he used these animals for carrying heavy loads. Gradually, man, with his tendency to experiment and find out more about various things, must have found that the tree trunks when hollowed out proved a much better means for travelling over water. Thus a series of discoveries like floating skins of animals, oars, boats, rollers, wheels, vehicles etc have taken place gradually. The Romans realised the importance of roads for military and commercial use, where as in India, first
roads were designed for pilgrims' travel. In due course of time several ways of transport system have been developed for different purposes with the locomotive land transport was revolutionised. The development of road transport which has been remarkable in recent past is still at a progressive stage. Many inventions have been taken place. But what is most conspicuously absent is the inventive strategies while handling transport management; road in particular.

India however, because of the colonial rule under the British, could not make any major contribution in the development of Transport Management. Very recently, Transport System has taken some roots in the Indian soil. If at all implemented in full swing, its strategies, there is going to be considerable time-lag in planning, execution and realisation of optimum benefit from progress of its infra-structure.

With the increasing complexity and specialisation in activities of an enterprise their co-ordination and control have become so important that General Management has emerged as a distinct and a very important function in attaining the goals of an organisation. Therein, the General Management it self has become a specialised activity. With the growth of the
specific characteristics viz.,

i) Systematic progressive approach

ii) Precision

iii) Degree of completeness

iv) Inviolability of findings

Transport Management has emerged as a "Scientific Transport Management". In fact, it is the by-product of the interaction between social sciences, behavioral sciences and technological sciences.

"Scientific Management merely attempts to apply the logic of effective thinking to the solution of business problems. It uses the applied business knowledge and principles that have accumulated, classified, codified and accepted to date, with due allowance for their limitations ........."

—Ralph C. Davis

*" THE FUNDAMENTALS OF TOP MANAGEMENT"

This scientific approach expects a well network of series which is convenient and easy to approach, emphasis the relationship between environment parts which are necessary for anybody (organisation) to function. This system concept is based on the philosophy that 'whole is greater than the some of the parts' changed which is introduced in one part of a system creates a chain reaction, enabling us to analyses a given situation for its functional approach.

The whole system covers the fundamental components viz., vehicles, terminals and power. The monitoring system of these components develops communicative Management while manipulating the above components in different permutations and combinations.

This manipulative ability varies from time to time and place to place. Mismanipulating give rise to the several problems. If they are unsolved then and there, we will be having a problems galore as:
1.4. PROBLEMS OF THE TRANSPORT SYSTEM IN GENERAL AND MANAGEMENTAL STUDIES IN PARTICULAR

1. PROBLEM OF VEHICLES CONGESTION

Vehicles Congestion has lowered the average speed to nearly 13 kmph, in London and even less in Tokyo and other parts of the World.

2. PROBLEM OF CASUALTIES

Accidents are increasing in the developing countries where fatalities per km. travelled are often 20 times higher than in industrial countries.

3. PROBLEM OF TIME

Vehicles wait in endless queue for two or three turns a day, causing great waste of time at ship-yards, air-ports, check-nakas, refineries of Greater Bombay in particular.

4. PROBLEMS OF CHAOS

According to World-Bank-Aids Traffic Plan, the nature of the people commuting during peak hours is likely to increase from 2.15 million to 3.26 million by 2001 creating a chaos on the roads of Greater Bombay.
5. **PROBLEM OF FUEL**

Transport system is fully dependent on petrol/diesel. Alternative sources are not yet tapped.

6. **PROBLEM OF MOTION**

Around 1,00,000 (One Lacs) vehicles ply on certain highways like the Eastern Express Highway, everyday making the Zones extremely congestive. Many Fly-overs are needed to solve the problem. Is the construction of fly-overs the only solution?

7. **PROBLEM OF LICENSES**

If 333 new Licenses are being issued by the R.T.O.* Bombay, everyday (a current fact), the number will increase to 400 or 500 per day in the course of time (by 1997). Then the efficiency of the existing road network would decrease at least by 50% if appropriate management skills are not used.

8. **PROBLEMS OF INDISCIPLINE**

3000 (Three thousand) additional traffic constables and 5000 (Five

* Regional Transport Office.
thousand) home guards and some N.C.C. cadets are necessary to prevent transport indiscipline on the part of both pedestrians and motorists, particularly during peak hours. In Bombay Without voluntary organisations this cannot be achieved. So we should find other alternative solutions, diverting the human resource of home guards to some other good cause.

9. **PROBLEM OF PEDESTRIAN CROSSING**

At present Bombay needs 40 to 50 flyovers and about 200 to 300 subways for easy movement of vehicles and betterment of pedestrians and their safety.

10. **PROBLEM OF BAD ROADS**

The traffic department, of Greater Bombay estimates that bad roads generally, lead to consumption of an extra 5,00,000 litres of fuel at an avoidable cost of one crore per day, and take a toll of 12 lives in the city every month.

11. **PROBLEM OF INCOMPLETION**

Of the 350 Kms arterial road, net-work of Greater Bombay, concreting has been completed on just 140 Kms. Till the completion of the total work, the city undergoes sentence of death.
12. **PROBLEM OF BUSINESS**

Because of the wretched road condition, in the suburbs taxies / buses / lorries / auto rickshaws have lost about 20% of the business as most of the people prefer to travel by local trains.

13. **PROBLEM OF ROAD DIGGING**

Road digging has eliminated 600 taxi stands out of 2800 in the city and suburbs. This is also somewhat true with transport offices and bus stands. Transport has been hit as hard by the slow pace of work.

14. **PROBLEM OF CO-ORDINATION**

In the road maintenance, it looks, there is no co-ordination among the Bombay Municipal Corporation, the Traffic police, the BEST* Authorities and other agencies of transport. So something is wrong somewhere which needs immediate correction.

15. **PROBLEM OF CONTAINERS**

If the road was open for all sets of Vehicles, it would impede transport

---

* Bombay Electric and Suburban Transport Undertaking.
movement of 4.80 lakh containers. The
delay of a single container day costs US
$ 10,000 (Ten thousand). The delay in
container movement has international
ramification.

16. **PROBLEM OF SHORT - CUTS**

The wrong policies of the road
traffic management of Bombay led to the
discovery of 'short-ways' by the
transporters. In fact the short-cuts are
passports to heaven and so there is no
wonder, if they are not reaching their
destination on the right time.

17. **PROBLEM OF PARKING**

The location, fine, parking fees and
such things are increasing day-by-day
without proper solutions.

18. **PROBLEM OF VARIETIES**

Solar-electric-gasoline hybrid cars,
nuclear cars, computerised cars and such
motor cars are not run on the roads of
Bombay. We have no concrete technology
or concrete transport system if such
vehicles ply on the roads, in future...

19. **PROBLEM OF INTER-DEPENDENCY**

Harassment by the police, weigh bridge
techniques, accidents, octroi and many
such problems are handled by the
concerned authorities in an experimented way, creating 'chaos' in the road transport system of Greater Bombay.

20. **PROBLEM OF LIFE-LINE**

Merely widening a single road lane to double width would increase the life of trucks and types by 10% out of 31,000 (Thirty one thousand) Kms on National Highways, where 13,000 (thirteen thousand) kms are having single lanes.

21. **PROBLEM OF DENSITY**

We have over 1.5 million kms of roads. But the density is only 0.45 kms of roads per every sq. km. of area. This leaves India behind developed countries where road densities exceed one km for every sq. km. in all cases. As we enter the 21st century to become a modern industrial nation, we have to explore ways and means of allocating adequate funds to meet the Traffic requirements and the 'Developmental objectives'.
22. **PROBLEM OF COLLABORATION**

One will have to consider foreign collaboration for technical know-how as a part of research and development. But such collaboration needs feasibility.

23. **PROBLEM OF TRAINING**

The consultancy services of road transport expects Automobile Manufactures, the General Insurance Companies, the Petroleum Corporations, Research Associations and road Transport Agencies to sponsor jointly an institution to impart drivers training in different parts of the country as well as the training for the technicians.

24. **PROBLEM OF MODERN FACILITIES**

In a country like India having thousands of transporters hardly 0.2% have computerised their day-to-day work. Why is it so?

25. **PROBLEMS OF MARGINAL PROFITS**

Many companies make payment of freight after 60 to 90 days. The transporters have to make 50% advance payment for hire of the trucks and the balance hire charges immediately on the receipt of the acknowledgment. Thus delayed payments eat
away margin of the profit as the transporters has to manage his finance from the market at heavy rate of interest.

The exponential growth of such problems, has become a lethal phenomenon on Indian roads every where. But the impact of this tragic development on our legislatures, courts and law enforcing agencies is insufficient, with the result that the efficiency of the Road Transport System, has lowered to its minimal range, leading to heavy nation loss.

This cumulative effect demands revision of the studies of modern managemental programmes.

So is the selection of the research problem by the researcher as:

1.5. RESEARCH PROBLEM

"A study of the management problems related to road transport system of Greater Bombay".

1.5.1 EXPLANATION OF TECHNICAL TERMS USED IN THE ABOVE PROBLEM

1) Study :

This encompasses the critical assessment.
ii) Management:
   a) "Management is work and as such it has its own skills, its own tools, its own techniques. Management is a practice. Its essence is only knowing but doing." — Peter F. Drucker
   b) "To manage is to forecast and to plan, to organise, to command, to co-ordinate and control." — Henri Fayol

iii) Problem:
   a) A thing that needs a solution without which its progress gets temporarily blocked.
   b) An obstacle which needs immediate solution. — C.V. Bhimasankaran

---

3 "NEW DIMENSIONS OF MATHEMATICS", Page 67, Book field centre, Bombay.
iv) **Transport** :

   a) "The conveyance or movement of goods and persons from one place to another."\(^4\)
      
      — Rangparia

   b) The movement of goods and persons from place to place and various means by which such movement is accomplished.

v) **Road Transport** :

   "Movement of goods and persons on the surface of the earth/soil, Different means of road transport consist of Buses, Motor cars, Trucks, Tankers, Animal carts etc."\(^5\)

   — Latif

---


5 "ORGANISATION OF COMMERCE", Page 236, chetna publications Bombay.
vi) Greater Bombay:

The word 'Bombay' is derived from Mumbadevi. Bombay was cluster of seven islands called Heptanasia by Ptolemy in 150 A.D. Today area from Colaba to Mulund and Dahisar is called "Greater Bombay".

-- Text book, Geography

The research study aims at the following objectives.

1.6. OBJECTIVES OF THE RESEARCH STUDY

(a) To study the current problems of management related to the transport system of Greater Bombay.

(b) To classify the management problems related to the transport system of Greater Bombay.

(c) To make a comparative study, with other cities/states/countries with reference to those problems.

(d) To find suitable solutions to those problems of management.

1.7. HYPOTHESES OF THE RESEARCH STUDY

(a) The nature of the management problems of the Transport Industry varies from period to period when reviewed historically.

(b) The problems of Greater Bombay Transport Industry are closely associated with the problems of other transport systems of the other states of India.

(c) The managemental problem have their own Unique distributive system, in different Zones, for different organisations.

(d) The Bombay Road Transport System has its own unique features, the Management problems in particular differing from other cities/states/countries in several aspects.

(e) The management problems can be classified on the basis of certain factors.

(f) The management problems have definite solutions, in the Operational Research Process.

1.8. DELIMITATIONS OF THE RESEARCH STUDY

This study however, is restricted to the following items:

i) **Area**: Greater Bombay

ii) **Period**: Jan 1994 to Dec 1995
iii) Coverage:
The private bus transport and the lorry transport.

iv) Kinds of Material:
i) Living and non-living items

ii) Non-living covers inflammable and radio-active materials.

v) Number of agencies:
Five hundred sixty one agencies.

1.9. CONCLUSIVE ASPECTS

Management problems of the road transport system of Greater Bombay is the subset of Global Managemental studies. So one should search for their solutions in the soil of system Analysis of Modern managemental Programmes. The horizontal, vertical and cross-sectional views of these solutions aim at the efficiency of the Bombay Road Transport, increasing national output. On this three-dimensional vision, certain objectives are selected and hypothetical constraints are framed for the research problem, within the framework of investigative zones, to arrive at concrete solutions, which are highlighted in the subsequent chapters in depth.