

CHAPTER-1

INTRODUCTION

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Transport in simple words is an act of moving of people, goods and animals from one place to another. There are various means of transportation which historically comprised walking, swimming and running. But later on people started taking some wild animals as pets and fulfilled the requirement of transport. The speed and duration of animal powered transport was higher than walking and running. New invention in animal powered transport like wheel increased the efficiency of animal powered transport. In 19th century due to industrial revolution huge changes occurred in this sector. Combustion engine, steam ship and steam engine were invented. After the invention of combustion engine road transport became more competitive, corresponding due high competitive road transport in 19th century first time modern highways were constructed. Transport became the basic need for specialization in production and consumption at divergent regions. From the beginning to end it was clearly observed that the transport allow rapid trade growth in an economy. The economic growth of a nation depends on its transport capacity (Stopford, 1997). Due to the rapid modern cities operated, the physical distance between home and work expended, for daily need transport became very important. In contemporary years, economic activities have led to expansion of urban cities. It connects the all economic players mutually and influences their level of satisfaction by stimulating economic activities. Broadly, the passenger transport is craved up into two parts first is public transport and other is private transport. Public transport and private transport both working in different manner. The public transport mostly operated by a government body or corporate body, its functions are properly scheduled. The service of public transport is very organized on fixed routes. Private transport

operators provide ad hoc services to passengers. In private mode of transport better flexibility than public transport but its capacity and efficiency is lower than private transport. Public Transport is public utility with social objective (Agarwal 2010). For Economic Development it is very important to scrutiny their performance, specially to identify adequate measures which including price policy and proper investment for efficiency measurement. There is direct relationship between economic development and public transport. For rapid economic development, a strong transport system should be necessary. Public transport is used for carrying passenger as well as goods. A flexible and well controlled public transport could be increased the economic activities.

In India, the transport system consists of various modes of transport such as railways, roadways, ports and aviation. According to the report of World Bank in 2014, it was estimated that transport sector in India requires an investment of around 3.6% of total GDP for the coming 10 years. If the share of investment in transport sector increases in the above prescribed proportion, it would have pushed the share of overall infrastructure investment to 6.8% of GDP in 12th plan (This plan was called off in 2014). The Indian Railways has been managed and controlled by the government of India. The capacity of Indian railways to carry passengers and freight is much higher than other modes of transport. Road transport is considered as the second most important mode of transport after the Indian Railways. Road transport is operated by public as well as private operators. In 1951, the total road length in India was 4 lacs km. In 2000-01, the length has been increased 3420 thousand lacs km. This shows that during the last 50 years, road length has been increasing at an annual average rate of 5%. Road transport plays an important role inter-connecting airports, railway stations and port etc. Road transport is the prime motorized mode of transport that links the remote and hilly areas with rest of the country. In India, rail and

road transport play an indispensable role in the transport system, holding about 87% of the total freight traffic in India in 2007-08 (NTDPC 2013). According to the Total Transport System Study (TTSS), it was observed that in total inter temporal, the share in 1951 was 89% and which declined to 30% in 2007-08. But both rail and road transport plays a major role in passenger mobility. It was highlighted that total number of passengers carried by both roadways and railways had been increasing from 32% in 1951 to around 90% in 2011-2012 (NTDPC 2013).

The growth of public road transportation in India actually began in the early 1920s. By the end of 1920s, there was large number of vehicles under operation in various parts of the country. In 1932 it was observed that public transport suffered severe setback due to increased competition among bus operators, rising of unemployment among bus workers and concentration of bus operators on more popular roads. To put an end to these problems, Government has enacted 'The Motor Vehicle Act' of 1939. This act ensures the role of road transport on the basis of healthy competition in the public bus transport system in India (Padam, 1990). After independence the Road Corporation Act of 1950 came into force that enabled the state government to form Road Transport Corporation within their jurisdiction (Padam, 1990). There are various modes of transport by land, water and air. Among them road transport plays an important role in interconnecting airports railway stations and port etc. For short distance as well as long distance, passengers depend mostly on public mode of transport. Buses are important for passenger mobility in India. The public sector bus transport system is an alternative mode of transportation. Public sector bus transport system competes with different modes as well as private providers of similar services. There is a highly competitive market but at the same time they have to discharge public sector obligations like providing connectivity to locations which may not be attractive to private operators or providing services on uneconomic routes, with uneconomic

fares, delay in revision of fares, burden of concessional travel, high levels of taxation under Motor Vehicle Tax and Passenger Tax, higher fixed costs and limited flexibility as regards manpower. These factors need to be kept in view while undertaking an objective evaluation of their performance. In order to improve the efficiency and performance of public sector bus mode transport system, there is a need to improve technology of vehicles, modification of fleet composition in support of new and more fuel-efficient buses, strengthening of inspection and maintenance practices, etc.

It is known that transportation has notable impacts on environment and economy globally, owing to its huge energy consumption and necessity to move people and goods around. The current transportation system is not sustainable. It is well recognized that transportation needs careful attention and planning at both local and national level. Basically this study focuses on Haryana Roadways (STHAR). The position of Haryana Roadways in financial performance as well as physical performance shows better place among other State Transport Undertakings (STUs). But in changing economic scenario it is felt necessary to make a detailed study of the performance of Road Transport in Haryana at depot level. To find out the probable areas of strength and weakness it is necessary to evaluate the performance level of Haryana Roadways. In order to provide well-coordinated, economically safer and efficient transport services to the public, the authority lies with the State Office of the Director General of state transport. Huge amount is invested in transport sector in Haryana. The Haryana Roadways plays crucial role in providing transport services to both the Haryana state as well as neighbouring states. Haryana Roadways runs on an average 13 lacs km every day. There are new initiatives provided by Haryana Roadways to its customers for better services like new Volvo AC bus services and Saarthi has

been introduced on certain routes. Some routes are also in touch with Indira Gandhi International Airport and Domestic Airport of Delhi.

1.1 Rationale of the Study

Haryana is one of progressive state of India. After bifurcation with Punjab, the state transport unit has connected with every corner of the state. In 1987 there were only three RTA offices that regulated the transport departments but at present each district has its own RTAs office and its own depot. Presently in Haryana there are 24 depots and 13 sub depots. This study considers only 20 depots, because the study needs to cover the data from 2001 to 2016 to assess the overall performance and efficiency. There were 4 depots which had been established after 2001 and considered for this study. Therefore, it is important to understand the trend and performance of Haryana Roadways. Simultaneously this study aims to find out the overall and depot level efficiency of Haryana Roadways, which will be useful for policy making.

1.2 Research Questions

On the basis of previous studies, some important questions have arose and that is analyzed in the present study, they are-

1. What is the recent performance of Haryana Roadways for all depots in Haryana?
2. Which depots performed better and worse in terms of overall performance?
3. Is Haryana Roadways worked efficiently or not and is there any scope of reducing inputs for same level of output?
4. What are the policy recommendations for future improvements in the transport sector in Haryana?

1.3 Research Objectives

1. To measure the overall performance of Haryana Roadways and depot-wise from 2001-02 to 2016-2017.
2. To estimate the overall and depot-wise efficiency of Haryana Roadways.

1.4 Organization of Research

Broadly the study is organized in such a way to provide a guideline that would help to know how the work has been outlined in this dissertation. The organization of research will be useful for understanding that how the study has been conducted.

1. **Introduction** – The preceding pages of this chapter covers the general status of Transport. Fundamental issues and problems related to transport sector are covered in this chapter. This chapter provides an overview of Indian Road Transportation system and Haryana Road Transportation Undertaking.
2. **Review of Literature-** Research means search again and when a researcher try to work on a topic, review of literature would play a crucial role in understanding the various realms of the concerned topic. This chapter discusses on various research papers, journals, books, reports.
3. **Research Methodology-** The adequate tools and techniques that are adopted for empirical results are covered in this chapter. Choosing the right methodology will help to give good and authentic results which will be used for policy making.
4. **Haryana Roadways Transport Undertaking: Trends and Performance-** In this chapter the trends and overall performance is shown from the time period 2001-2002 to

2016-2017 of Haryana Roadways. CAGR has been used to examine the trends and overall performance of Haryana Roadways.

5. **Efficiency of Haryana Transport Undertaking-** With help of Data Envelopment Analysis (DEA) the total efficiency of 20 Haryana Roadways Depots is calculated in this chapter. Efficiency scores of selected depots would be used to identify the inefficient depots and suggest measures to improve the efficiency.
6. **Major findings and conclusion of study-** This chapter covers all findings of thesis and recommends the adequate policy measures which will be helpful for future growth of the Haryana Roadways.