CHAPTER 1

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Transportation, the cornerstone of modern civilization, is irrefragable. It is universally accepted as one of the barometers of the economic advancement of a country. A random survey will reveal that transport and economic prosperity are intertwined with each other. All developed countries in the world are well ahead of other underdeveloped countries in the sphere of transport. The great Industrial Revolution which ushered in the modern civilization owes its origin to the invention of steam engine by James Watt.

Transport has actually shrunk the modern world into what it is today. It has brought individuals and communities living in different regions closer together than ever before. When individuals from different countries come closer together, they also bring with them new inventions and ideas which have made civilizations possible, with the result, the modern world has considerably shrunk. In other words, transport has transformed the entire world into a single organisational unit. It is true to state that modes of transport are the veins and arteries of a country through which every development circulates. In the
words of an old economist, Jeremy Bentham "a people without roads would be a people without intercourse with the outside world, without the attributes of civilization." Nowadays the entire economic life of the people of a country depends upon the transport services from the supply of raw materials to the distribution of finished products. In fact the whole structure of industry and commerce of any country rests mainly on the development of transport system. It is clear that effective transport is indispensable for the economic progress and prosperity of any country.

ROAD TRANSPORT

Road means "any prepared route on land destined for the movement of goods and persons." ¹

"Transportation is a service or facility by which persons goods and property are conveyed from one location to another." ²

Roads and road transport form an essential ingredient of the infrastructure so necessary for all development and

modernisation. Specially in an era of planning, their adequacy cost effectiveness and efficiency build into the economy resilience so indispensable for self-sustaining growth."3

The road transport can be defined as any transport which is being carried on by wheeled vehicles operated by power, animals, human beings or machines on any road, whether metalled or non-metalled, to transport men or materials from one location to another. For "the object of transport is to increase wealth and welfare."4

CLASSIFICATION OF ROADS IN INDIA

The roads in India were classified at the Nagpur Conference 1943 as under:

1. National Highways  
2. State Highways.
3. District Roads and  
4. Village Roads

National Highways

These roads connect the different states within the country. The Central Government undertakes the financial

responsibility for the construction of these highways.

State Highways

These roads connect district headquarters and important cities with the National Highways. The State Governments are responsible for their construction and maintenance. These are the main arteries of commerce within the State.

District Roads

These roads connect the production and marketing centres with the highways or the railways. Most of them are unmetalled and hence, unmotorable during the rainy season.

Village Roads

They connect villages and groups of villages with the district roads. In spite of being the most essential means of transportation in the villages, they are in most cases no better than mere tracks and are completely unpassable during the rainy season. They are constructed by the co-operative efforts of the villagers and their maintenance is their joint responsibility.

On the basis of the method of construction, roads have been divided into:
(1) Metalled roads, (11) Non-metalled roads and (iii) Earth roads.

**Metalled Roads**

These roads are mechanically constructed for heavy vehicular traffic and the surface is cemented six inches thick or the upgraded surface is covered with bitumen or coal-tar. Once constructed, these roads last several years and the maintenance cost is very low.

**Non-Metalled Roads**

These roads are constructed with layer of broken stones covered with earth and bajri. Under the pressure of heavy vehicular traffic, and the impact of heavy rains, the broken stones are dislodged and pot holes are created. The maintenance cost of such roads is very high.

**Earth Roads**

These roads exist in the Indian villages, and are generally meant for bullock carts. They are totally unsuited to motor transport because deep ruts are formed on both sides of the road by the wheels of the carts. All bullock carts move
along the same track. During the monsoon season, these roads are filled with muddy water, and become impassable.

Based on their utility value, roads are divided into:

(a) Parallel roads and (b) Feeder roads.

(a) Parallel Roads

These are trunk roads which run parallel to railway lines; and are competitive because it is along these roads that motor transport competes with railway transport.

(b) Feeder Roads

Feeder roads connect the villages with the nearest railway stations either directly or through the main roads.

ORIGIN AND GROWTH OF ROAD TRANSPORT

Road transport has its own story of development. In the primitive age, man was forced to move from place to place in a never-ending search for food. He was able to carry with him only those items which were useful and which he could carry with him. Gradually he came to know that animals could be used as a means for shifting materials from one place to another. Later he found out that transport could be made more efficient
by transferring the loads from the animals to a carriage or drawn-vehicle. Sledge is one of such devices used for transport in icy lands. Later, with the introduction of the wheel, a revolution in land transport occurred.

It was first introduced in the lower Tigris-Euphrates Valleys in 3500 B.C. So long as there were no wheeled vehicles, roads with prepared surface were not needed. Making prepared roads was considered by the Assyrians and the Persians as an essential part of their policies. The most dramatic attempt in the classical world to build and operate a transport system was undertaken by the Romans, the best engineers of that time. They constructed timber bridges for military purposes.

The Road Transport Industry is vital and basic to the overall progress and prosperity of a country. More than a century ago, due importance was not attached to transport. They did not realise that good roads and efficient modes of transportation are as essential as manufacturing industries, banking and agriculture to develop national economies. The indispensability of transport, a major factor in the development of national and international economies has now come to be realised in all the countries of the world.

In road transport the automobile plays a vital role. At
present, the automobile industry in India is one of the most highly developed industries in the eastern hemisphere, with the exception of Japan and Australia. No other country in this sector of the globe possesses such a complete industrial infrastructure ranging from basic raw materials to many of the specialised machine tools used in the automobile manufacturing processes.

LORRY TRANSPORT

The role of lorry transport in the economic development has been clearly stated by Adam Smith as "the power of exchanging that gives occasion to the division of labour so that the extent of this division must always be limited by the extent of that power or in other words by the extent of the market." The lorry transport system contributes to accelerate the socio economic development of any developing country, particularly India. From the economic point of view, it is one of the prerequisites for development and from the social point of view, it is the "the heart-beat of civilization." Lorry transport has been considered as the nerve system of an economy. The importance of it has been realised and emphasised in all economies, whether it is capitalist or socialist, backward or developed. Thus, "in any comprehensive plan for national

reconstruction, the problem of transport and communication logically deserves priority."

The various benefits accruing from lorry transport may be classified broadly under two heads:


Economic benefits include the following: (1) Servicing consumption; (2) facilitating production; and (3) Promoting development, whilst non-economic benefits relate to (1) Political, (2) social and (3) Cultural.

Lorry transport not only meets the existing demand but also creates new demand by transporting a variety of goods that can be made available anywhere and everywhere, e.g. the betels and the bananas cultivated in and around Velur are transported by lorries to Bombay, Rajasthan and other Northern metropolitan centres everyday. Similarly the eggs produced in Namakkal and matches and crackers manufactured in Sivakasi and Thottiam are transported by lorries throughout the length and breadth of the country. The vegetables and fruits cultivated in Ooty, Kodaikanal and Yercaud are transported by lorries all over Tamil Nadu. Without the lorry transport, the vegetable market will remain basically local and domestic. The paddy from Thanjavur - "the granary of South India"- is transported by lorries to other
districts in Tamil Nadu and also to other adjoining states. The cement manufactured in Ariyalur and Puliyur in Trichy district and the Sankar cement manufactured in Salem district are transported all over the country by means of lorry transport. Without the help of lorry transport, many of the industries and factories cannot function successfully, especially in those places not connected by rail transport.

People in urban areas get what is produced in villages and those in rural areas, in turn, get the benefit of urban products. Consumers in mountainous tracts procure goods from the plains and those in the plains get what they require from the mountainous regions. All of them are benefitted by lorry transport.

SALIENT FEATURES OF LORRY TRANSPORT

Every mode of transport has its own merits, demerits and peculiarities. Railways are the most economical means of transport for carrying bulk goods for long distances. One of the greatest achievements to the credit of the railways has been in times of famines. Famines have lost their old horrors as the railways can rush food from the surplus areas to the famine-stricken areas speedily. Famines are no longer "food famines"; they have now become chiefly money-famines.
Special tracks have to be built for running the trains; though they can carry thousands of tons of goods at a time, construction of railroads involves huge expenditure and a lot of time.

Steamers and ships are very slow and the weather conditions seriously affect their free movement. Air transport is the fastest among all the modes of transport, but it is costlier, and suitable only for high-value and light-weight goods.

Lorry transport is exceptionally flexible and quickly adaptable to any situation. The lorry operators are free to ply lorries on any route within the state and to other states in the case of National Permit holders. The operations can be shifted from the unremunerative route to the remunerative one. Lorries can carry different kinds of goods such as agricultural and industrial goods. Lorry transport is cheaper and more economical in hilly regions or in far-flung areas, and villages with less population. Unlike the railways, it does not require huge initial capital expenditure. It provides complete door-to-door service without much rehandling, and it can take the shortest route since it is adjustable and adaptable according to the situational requirements.

Lorry transport entails not only lower overhead
expenditure but also lower maintenance expenditure than the railways, which involve huge expenditure on maintenance, buildings, rolling stock and equipment.

Lorry transport provides, without any extra charge, flexible service needed by the consignors and the consignees. Lorries load goods from the premises of the shipper or sender of the goods, and unload them at the desired place of the buyer. This kind of service avoids the unnecessary expenses on cartage and coolies which is otherwise payable either by the consignor or the consignee or the consumers to move the goods from the places of other modes of transport. Such facilities cannot be provided by railways, airways or waterways.

Lorry transport is suitable for the carriage of less bulky and perishable goods especially for short destinations. Time and punctuality are the important factors in fetching better prices for such goods. With the rapid growth and development of a network of road systems connecting all the important state capitals through the National Highways, lorry transport has started serving the needs of both short and long destinations.

"No wonder it is said of U.S.A that the roads built the
country and its economic evolution and not the country built the roads. 6

Lorry transport provides a very simple and easy procedure in respect of booking of fleet or the packing of goods. In most of the cases, packing of goods is not at all necessary, especially in the case of agricultural goods. But in the case of railways, a rigorous and cumbersome procedure is followed in booking, and packing the goods which take precious time and incur expenditure.

It may be argued that lorry transport is not fully reliable and it is less dependable than other modes of transport. This is because it does not adhere to the time schedule of arrival and departure of vehicles like railways and airways. Moreover due to mechanical defects or failure of the engine, sometimes lorries unexpectedly stop on the way. Hence, their punctuality is not always guaranteed. But if due care and caution are taken on the maintenance and operation, lorry transport can be made more dependable and reliable.

Diversity of interest prevails between the road authority and the road users. The Government has the responsibility of construction and maintenance of roads. On the other hand, the owners of vehicles are concerned with the use of the roads. The economies and diseconomies accruing to road-haulers mainly depend upon the condition of the roads. If the condition of the roads is bad, the cost of maintenance of the vehicles will be on the high side and vice versa. In other words, one can easily understand that good condition of roads decreases the maintenance charges of the vehicles, while the bad condition of roads increases the maintenance charges of the vehicles. It is very clear that what is considered as economy by road authorities may become the diseconomy of road-haulers. Defective and deficient transport planning in India, without any co-ordination between the modes of transport has resulted in keen competition.

Another important feature of lorry transport is that the meeting of the working expenses is beyond the control of the lorry transport operators. Moreover the lorry transport operators are paying a sizable sum to the government in the form of various taxes and levies. Besides, bad roads cause heavy wear and tear of the vehicles, with the result, the L.T. operators are forced to spend additional amount on maintenance which ultimately increases the operational cost of these vehicles.
Yet another noticeable feature in LT is the dominance of small operators. "In Great Britain, 11 per cent of the total vehicles is under the control of single lorry operators and if the size group of operators owning one to five vehicles is considered, 34 per cent of the vehicles come under their ownership."\(^7\) "A survey in France has shown that 77 per cent of the organisations of road haulage over 40 per cent of goods are transported by vehicles."\(^8\) Small LTOs dominate over the big lorry operators in Tamil Nadu.

**STATEMENT OF THE PROBLEM**

**Importance of Lorry Body Building**

The spectacular growth of Lorry Body Building Industry in Tamil Nadu has resulted in the emergence of many ancillary and service industries such as tinkering, painting, selling of timber and hardware, and auto electrical retail shops. Lorry Body Building provides employment opportunities for those who are unemployed and under-employed and saves them from the dangers of poverty and malnutrition.\(^7\)

\(^7\) Michael Webb, *Transporting Goods by Road, Policies and Techniques and Distribution Efficiency*, London School of Economics and Political Science, London, 1972, p.120.

\(^8\) Ibid, p.121
Road transport is the king-pin of the transport system of any country. It starts and completes the movement of men and goods from one place to another. It acts as the first as well as the final link between the consumer and the producer. It plays an important role in the economy of the country by bringing backward areas into the national mainstream of development. Therefore, it has been rightly considered as the sine qua non of economic development. It brings socially desirable communication and breaks the isolation of villages by evoking social awakening among the rural masses. A proper transport development exploits natural resources and also ensures proper distribution of available goods for better living. Thus, adequate transport facilities accelerate socio economic development of the country.\(^9\)

The degree of development of transportation directly influences the economic, social, cultural, political and religious activities of man. The stage of development of transportation is the de facto barometer of economic, social, commercial, agricultural, industrial and political progress of a country. National integration is possible only if there are proper transport facilities between regions and between states.\(^{10}\)


Above all, a quick and wide network of transport system helps the eradication of anti-social and unprogressive institutions such as casteism, communalism, provincialism and linguistic chauvinism. From the point of view of city-dwellers, transportation has done much to break the confinement, congestion and concentration of people in large cities. Rural folk going to cities are benefitted by their contact with the scientific advancement in the life of the people there. The wish for travel and the desire to visit new places promote easy exchange of ideas among the various segments of the society and also broaden the mind, improve the intellect, enrich the knowledge, enhance the understanding, elevate the mind, improve the culture, and put a sense of unity in the mind.

There are many studies relating to efficiency, profitability, management and employment in road transport, the problems of lorry transport and of small lorry operators in Tamil Nadu especially in Namakkal, the problems of lorry brokers in Salem town, problems and prospects of private bus operators with special reference to South Arcot district, but no study has been made till date as regards lorry body building, the construction cost analysis thereof and the problems confronted by it in Tamil Nadu. Hence, it is felt that this lacuna be removed by making an in-depth study of the various aspects
connected with the lorry body building vis-a-vis the problems faced by the industry in Tamil Nadu. A sincere attempt is made to make a first hand detailed study of the Lorry Body Building Industry in Tamil Nadu. This is the first of its kind.

**REVIEW OF LITERATURE**

The main aim of this study is to provide a brief account of the findings of some of the important studies related to cost of construction of lorry body building and road transport. In general, literature available on road transport and especially lorry body building is scanty. Many studies have been conducted on particular units of road transport in Tamil Nadu dealing with their structural patterns and operational system. Some studies have been made highlighting productivity and efficiency aspects of road transport system. Till date no special study has been made relating to the cost-benefit analysis of lorry body building in Tamil Nadu. Suffice it to state that there is no direct literature readily available on the topic under review. Tamil Nadu was the first state in the whole of India to have started Regional Road Transport Corporations. There are a number of committees appointed by the Government of India which have given some references relating to road transport, some of which are listed below:
1. The Road Transport Re-Organisation Committee (1959)


4. The Study Group on Variable Units (1968)


The Report on the Road Transport Industry in Andhra Pradesh by Dr. V.V. Ramanathan (unpublished) (1955) is a pioneering effort in studying the problems of road transport industry in a particular region. This study provides a deep insight into the problems of both passenger and lorry transport, and has made many useful and practical suggestions for the improvement of the industry as a whole. The methodology adopted for the study may prove to be useful for any researcher on regional road transport problems. But the conditions having changed, during the last 35 years since the submission of the report, there are new issues cropping up for consideration.

The unpublished thesis submitted by S. Kirupakara
Mohandas, University of Madras, in August 1978, under the heading of 'Pricing in Passenger Transport Service with special reference to Tamil Nadu' analyses only the cost aspect of passenger transport system.

The National Council of Applied Economic Research (NCAER) conducted a Survey on "Some Aspects of Goods Transport by Road in the Delhi Region" (1958). This study made an attempt to focus attention on the problems of lorry transport industry of a region. The special feature of the study is the careful analysis of the organisational features and operational problems of the goods vehicles operating in the Delhi region. However it is a brief study published under the series 'Occasional Papers'. It also did not touch the financial problems of the aforementioned operators.

The Report of the Road Transport Reorganisation Committee (1959) has made a very valuable contribution towards understanding the problems of road transport industry sympathetically and made a bold attempt towards correcting the bias in the government policy of development of railways at the cost of the growth of road transport industry. However the Committee did not make any special study of the problems of the lorry transport which occupies a pivotal position in the
transport system and much less about the cost-benefit analysis of the lorry body building industry.

Special mention may be made at this stage of the study on Railway and Road Transport in India entitled "A Study in Optimum size and Organisation" (1964) by Dr. M. O. Mathew, one of the rarest studies available for understanding road transport and the magnitude of the problems relating to the road transport system.

The Committee on Transport Policy and Co-ordination in its Preliminary Report (1961) and in its Final Report (1966) have made brief references relating to the problems of goods transport by road and the expected demand on the lorry transport industry in the context of the planned economic development of India. They have also analysed the very important point of nationalisation of goods transport by road by the State Governments. But they did not make any special mention regarding the lorry operators since the subject was not among the terms of reference.

The Regional Transport Survey of Madras and Pondicherry by the NCAER (1967) has made some of the important and useful projections of the traffic demand in the area under survey.
The Road Transport Taxation Enquiry Committee (1965) was set up by the Govt. of India under the chairmanship of Dr. B.V. Keskar, to study the problems of road transport and particularly the tax element in the cost of operation of the road transport operations. The Committee submitted two interim reports, one in 1966 covering inter-state transport and the other in June 1967 on Octroi and other checkposts as desired by the Central Government.

The study entitled "Road Transport Industry - A Review" (1979) by the National Council of Applied Economic Research made a special approach in finding out the impediments in the growth of the road transport industry. The utility of the study was further enhanced by the collection of field data from sixty-three road transport operators of different categories operating in seven different cities spread throughout India. The sample survey of the Road Transport Operators conducted by the RBI (1981) is the major study of the road transport operators undertaken so far. This survey covered as many as 6129 road transport operators from hand-drawn vehicles to major vehicles.

Shankar has studied the employment potential of the road transport industry. According to him, "it has the highest employment potential and assessed that a unit of investment
offers employment for 19 in railways, 17 in small scale industries and 100 in road transport industry. Every new vehicle put on road creates employment for 12 persons.\textsuperscript{11}

"Ganesan and Ramani in their study stated that any business-undertaking, the first criteria would be optimise the various resources of their demand.\textsuperscript{12}

"Sharp, C.N. in his work examined the studies undertaken in the field of transport system of U.K. and studied a number of basic problems like transport economics, transport investment, transport pricing, reduction in accident rate".\textsuperscript{13}

"Harrison, A.J. studies various techniques of measuring the performance of transportation system".\textsuperscript{14}

\footnotesize{11. Shankar, V. "Road Transport Industries Problems" Mobile, wheel, 18 Spoke 8, April, 1980, p.15. ---


The Hindustan Motors Ltd., conducted a study pertaining in the various problems confronted by the automobile industry in India.  

Alwin Prakash, B. made a study of the Assessment of the performance of the Kerala State Road Transport working in 1959-71.  

Sastry, E.S. has done a study of the Physical and Financial performance of some of the Road Transport Undertakings in India, including the Patiala and Punjab States Union Road Transport Corporation (PRTC).  

Kulkarni, S has analysed the working and problems of Passenger Road Transport in Maharashtra.  

Jayasankar, K has made a study of the working of Andhra Pradesh State Road Transport Corporation.  

Arora, S.K. has studied the performance of Road Transport Undertakings both under private and public sectors in Punjab and has made a comparative study of the performance of Punjab Roadways, Andhra Pradesh, Gujarat, Rajasthan, North Bengal and Kerala State Transport Corporations.  

Kulshreshta, D.K. has analysed the managerial problems of road transport undertakings in the country and suggested various measures to lower down the cost of bus operation and to improve their revenue.  

Akbar Alikhan, M.D. has made a study of the problems and different aspects and methods of financial management of SRTCs in India.  

The foregoing review represents the varied views of the authors and various committees regarding the importance of road transport, efficiency, profitability, management and employment in road transport, the problems of lorry transport and small lorry transport. 

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operators in Tamil Nadu, in Namakkal town, business of lorry workers in Salem town, problems and prospects of private bus operators with special reference to South Arcot district, but no study has been made till date as regards the lorry body building industry, the cost-benefit analysis thereof, and the problems confronting it in Tamil Nadu. Hence it is felt that this lacuna be removed by making an in-depth study of the various aspects connected with the lorry body building vis-a-vis the problems faced by the industry with special reference to Tamil Nadu. A sincere attempt is made to make a first hand detailed study of this lorry body building industry in Tamil Nadu, thus, widening the scope of the topic so as to fill the above mentioned gaps in the field.

OBJECTIVES OF THE STUDY

1. To study the role and significance of lorry body building industry in Tamil Nadu.
2. To discuss in general sequential processes in the lorry body building industry in Tamil Nadu.
3. To study the factors influencing the location of lorry body building industry and those leading to the concentration of the industry in Salem district.
4. To assess the economics of lorry body building industry in Tamil Nadu.
5. To analyse the problems faced by the lorry body building industry in Tamil Nadu, and
6. To make suggestions based on the findings of the study.

HYPOTHESES

1. The momentum of an early start has led to the localisation of the lorry body building industry in Namakkal.
2. Locational advantages have contributed to lower cost of lorry body building industry at Namakkal in Tamil Nadu.

SAMPLING AND METHODOLOGY

In Tamil Nadu, there are 360 lorry body building units, spread over Salem, North Arcot, Coimbatore, Trichy, Madurai, Tirunelveli and Kanyakumari districts. Stratified Random Sampling technique has been followed in selecting the sample units. The study area has been divided into four strata as given in the table 1.1 and 50% of the units of each stratum have been selected by drawing lots, while drawing the sample from strata 2, 3, and 4. Tippett's table of random numbers was used while drawing samples from stratum 1 Salem district.
The study is based on the primary data collected from the sample lorry body building units.

A detailed structured schedule with 9 major divisions and 65 sub-divisions was prepared. A pilot study was conducted on 25 units and responses were elicited from the respondents. Based on the experience gained in the pilot study, the schedule was revised and applied to the remaining units. The application of the structured schedule was followed up by personal interviews by the researcher himself. The entrepreneurs were interviewed either in the units or at home according to their convenience.
during times of rest. The interview was in a natural, conversational style so as to ensure the reliability and validity of the data. The responses were whole-hearted in general and they were recorded on the schedules after the interview, and any missing details were gathered immediately.

After completing personal interviews and collecting the filled-in schedules from these 180 sample units, they were processed for further analysis. One way and two way tables were prepared, and percentages and averages were worked out. Bar diagram, pie diagram and graphical method were used to highlight the data. The graphs and diagrams have been prepared by using computer and H.P.7475 plotter. Trend analysis was made and inferences were drawn therefrom leading to conclusions. On the whole, the study was very interesting, sometimes challenging as it was exploratory in nature.

LIMITATIONS OF THE STUDY

1. This research study is confined to a period of 10 years only i.e. from 1982 to 1991.
2. Non-availability of secondary data relating to this study to vouch for the primary data collected is yet another impediment.
3. The data collected from different entrepreneurs who are mostly illiterates and do not maintain proper accounts, are only approximations based on their memories.

4. With no prior research study ever conducted on this important topic, the present one becomes a pioneering effort in this arena, thus, devoid of relevant materials which could have otherwise been available from various sources.

ARRANGEMENT OF CHAPTERS

This study is divided into six chapters.

The First is the present chapter; deals with Transport, Road Transport, Lorry Transport, Salient Features of Lorry Transport, Statement of the Problem, Review of Literature, Objectives of the Study, Hypothesis, Sampling and Methodology, Limitations of the Study and the Chapter Scheme.

The Second Chapter discusses the Role and Significance of Lorry Transport which includes Economic Significance, Political Significance, Social Significance, Growth of Lorry Transport and a Profile of Tamil Nadu.

The Third Chapter aims at discussing the locational factors conducive for establishing Lorry Body Building Industry
in Tamil Nadu in general and Salem district in particular.

The Fourth Chapter analyses the cost structure of the Lorry Body Building Industry in Tamil Nadu. It gives a detailed discussion of the various aspects of the Lorry Body Building Industry such as the Process of Lorry Body Building and other allied units in Tamil Nadu, Sample Survey of Lorry Body Building Units and the Economics of Lorry Body Building in Tamil Nadu, while discussing these aspects, two hypotheses have been formulated and tested.

The Fifth Chapter highlights the problems faced by the Lorry Body Builders in general and Tamil Nadu in particular.

The Sixth and concluding Chapter contains a brief summary of the earlier chapters, with focus on the findings and suggestions emanating therefrom.