CHAPTER - I

INTRODUCTION
1.1 INTRODUCTION

Industrialisation has been viewed as a prerequisite to economic development. It is not only a generator of economic growth but also serves as the transformer of socio-economic institutional set up of the economy (Singh, 1982). Industrialisation is an effort in which the underdeveloped countries place a major hope of finding a solution to their problems of poverty, insecurity and overpopulation, and ending their newly realised backwardness in the modern economy (Bryce, 1960). In fact, industrialisation provides a wide range of consumer choice, increases productivity and standard of living, creates industrial skills, promotes capital formation through higher wages and diverts surplus farm labour to modern industry. But it is not easy to define the process of industrialisation because it is a multi-dimensional process. Its objectives are by far and not the same in different countries and in different socio-economic and historical conditions.

In defining industrialisation, Sutcliffe (1971) proposed the following three fold criteria for taking a country to be an industrialised one:

i) a minimum of 25% of the G.D.P has to originate in industry;

ii) of which a high, say, about 60% must originate in the manufacturing sector; and

iii) at least one-tenth of the population must be employed in the industry.

These criteria are meant to capture the essentials of industrialised economy. This definition covers almost all the aspects of industrialisation and can be considered as more exhaustive.
Economic history demonstrates that to eliminate a country's technoeconomic backwardness, it is necessary to develop industrial sector and then to diversify it over a wide range of area and activities. Industrialisation is the key to restructuring the economy, as it involves a number of structural changes, such as rise in the share of industrial output and employment, changes in the production techniques, factor intensities, increase in productivity, changes in import and export composition, patterns of demand etc. It helps to develop a technically up-to-date and diversified domestic economic structure characterised by a dynamic manufacturing sector producing means of production and consumer goods (Planning Commission, 1980).

Myrdal (1958) emphasized the indispensability of industrialisation to achieve higher productivity, higher per capita real incomes and standard of livings. The present day rich countries have achieved rapid economic development through the process of industrialisation. The Under developed Countries of today, thus, consider industrial growth as the basic means by which their problems of acute poverty and problems of unemployment could be mitigated.

Historically, the level of per capita income has been found to be correlated with the degree of industrialisation. Chenery and Taylor (1968) found a statistically significant relationship between per capita income and the degree of industrialisation. Thus economic development has been identified with industrialisation, which means the growing volume of industrial output both in absolute and relative terms as contrasted with agriculture (Jorgenson and Griliches, 1967).
The real success of industrial strategy in solving the problems of poverty, unemployment, backwardness etc. depends on the large number of socio-economic and political factors. Among the economic factors the productivity growth and structure of technology as reflected by degree of factor substitution in industrial sector have been consider as the most significant policy variables in the formation of growth oriented industrial strategy. In the recent times, the productivity growth has recognized as the dominant determinant of economic growth (Ahluwalia, 1991).

In the era of liberalisation, India's economic policies are geared towards economic growth. The economic reforms of 1991 raised expectations about industrial growth in some quarters while there were apprehensions about its adverse impact in some. The devaluation of the rupee has enhanced the demand for exports there by boosting the Indian industry (P. Venkataramaiah and L.G. Burange, 2003). Thus, in the formation of strategy for industrial development, the knowledge of productivity growth, and elasticity of substitution directs the planners to formulate the appropriate strategy to achieve goals like rapid economic growth, balanced regional industrial development, high level of efficiency, greater employment opportunities etc., (Sunil Kumar, 2001).

The analysis of productivity growth by industrial sector provides an important tool for assessing how individual activities contribute to changing structure of the dynamic economy. The trends in productivity guides the planners to formulate a rational policy of resource allocation at both national and regional levels. On the other hand the degree of factor substitution can influence the success of industrial development strategy in an economy. The elasticity of substitution is one
of the most significant technical parameters of the production and cost functions which determines the patterns of resource utilisation (Benerji, 1971). Considerable work has been done on the theoretical and empirical problems of estimation of production function in the Indian industries. These studies were aimed at the contributory factors of output growth, returns to scale, productivity indices, technical progress, elasticity of substitution, etc.

Most of the studies relating to the concepts of productivity and elasticity of substitution have concentrated in Indian manufacturing sector. But there are very few studies relating to the economy of Andhra Pradesh economy to draw considerable interpretation of industrial growth and productivity in formulating analytical framework.

1.2 THE MANUFACTURING SECTOR OF ANDHRA PRADESH

The south Indian States, namely Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Union Territory of Pondichery account for nearly 19.37 per cent of the National GDP. During the first half of 2004, the total investments of India touched Rs. 20,74,894 crores of which Andhra Pradesh attracted Rs. 57,189 crores. The GDP of the State amounted to 1,77,883 crores in 2003-2004.

Industry monitor reviews that the performance of five key sectors in the state for the year 2004-2005 and forecasts outlook for the coming year 2005-2006. The key sectors identified, as per the contributors to SGDP in Andhra Pradesh are Agro-based industries, Pharmaceuticals, Manufacturing, IT and Textiles.
The manufacturing sector posted a good growth at 8.39 per cent in 2004-2005. This is the highest growth rate posted by this sector in the last eight years. The sector's contribution to GDP in 2004-2005 was Rs. 2,65,119 crores, which in percentage terms is 17.33 per cent of the India's GDP. And also the state's Manufacturing sector has provided additional employment to 18 lakh people from 1995 to 2003. The new Industrial Policy 2005-2010 of Andhra Pradesh is aimed at promoting industrialisation in the state.

Andhra Pradesh is one of the major contributors in Basic metals and alloys, Non-metallic mineral products, Machinery, Beverages tobacco and tobacco products, Food products, Textile products to output, net fixed capital, and value added. Though Andhra Pradesh is agriculturally advanced, non-agro-based industries account for 58 per cent of output, 73 per cent of value added and 89 per cent of net fixed capital. This is not because the state is highly industrialised but because of the large-scale public sector units, which provided the foundation for industrialisation of the state. The liberalization led to a higher growth rate in the manufacturing sector in the 1990's compared to 1980's. But after the initial pent up demand for manufactured articles was satiated, the industrial sector facing a recession. Cheap imports consequent to trade liberalisation as per WTO norms also affect domestic industry. The infrastructure that is being developed in the state is also largely focused on IT sectors to the neglect to the industrial sector. It may be noted that the IT sector is growing because of export demand and there is very little domestic demand. In the long run this cannot be sustained unless domestic demand grows. The growth of domestic demand depends on the increase in the production of the industrial sector.
It is observed that much emphasis is being placed on information technology both at the national and state level (L.G. Burange, 2003).

In view of the limited coverage of earlier studies, the present study makes an attempt to analyse the trends in productivity, estimate the parameters of Industrial production functions, type of technical progress and the factors affecting Total factor productivity in the selected manufacturing industry groups of Andhra Pradesh.

1.3 OBJECTIVES OF THE STUDY

The specific objectives of the study are as follows:

1. To estimate the production function for the selected manufacturing industry groups of Andhra Pradesh.
2. To examine the trends in total and partial factor productivity indices.
3. To examine the relationship between capital intensity and labor productivity.
4. To identify the factors influencing the total factor productivity.
5. To examine the impact of managerial resources on the related variables.

1.4 SCHEME OF CHAPTERISATION

The thesis has been organised into six chapters.

- The first chapter is devoted to present a brief introduction of the topic, objectives of the study.
- The second chapter deals with data-base and deflators used and the definitions of the variables, which are considered, in our study. The statistical methodology and the procedure used in estimating the production functions,
returns to scale, elasticity of substitution and partial and total factor productivity indices are also presented in this chapter.

- The third chapter presents a brief review of the studies in the areas of production functions and productivity indices.

- The fourth and fifth chapters consists of the empirical investigation of production functions, productivity trends, factors affecting total factor productivity and impact of managerial resources on the related variables in the selected manufacturing industry groups of Andhra Pradesh.

- The summary and conclusions are presented in the sixth chapter.

Selected Bibliography is presented at the end.