CHAPTER -1

INTRODUCTION
CHAPTER -1
INTRODUCTION

The dictum "As steel goes so goes the economy" pinpoints the vital role of steel in the overall economic significance of the nation. Steel is the backbone of all industrial and commercial activities; hence, it is considered as industry of industries. It is the basic industry which is indispensable to propel a developing economy towards the path of healthy growth. Steel is used as the basic metal in manufacturing of metal products, transport equipments, textile and other machineries.

Iron and steel industry in India had its origin in 1907 with the establishment of Tata Iron and Steel Company at Sakchi in Bihar, later on two more companies followed, one in 1908 started at Hirapur in Bengal State and other in 1923 at Bhadravati called Mysore State Irons Works (Karnataka). India is the 10th largest producer of steel in the world with a production of 18.1 million tonnes per annum (MTPA) in the year 1992. The world's total output of steel is about 750 MTPA. The demand for steel is considerably more in Asian countries, particularly in India because large infrastructure projects are coming up. The per capita consumption of steel in India is 22 Kilograms (Kgs), which is abysmal as compared to the world average of 149 Kgs and Asian average of 10 Kgs. Hence, potential demand for steel in India is quite high which augurs well for the industry. The consumption of steel in India was 20.94 MTs in 1995-96, according to the Ministry of Steel estimates.

Steel Industry and Its Rationale:

Planning is a continuous movement towards desired goals, precise formulation of plan objectives have varied from plan to plan, essential goals of

Indian planning have remained unchanged.\(^2\) Iron and Steel occupied an important position in heavy industries and it provides a basic material for the growth of its subsidiary and ancillary industries. Hence, the Second Five Year Plan gave much priority to iron and steel. The production levels of steel products determine the tempo of progress of the economy.

In the long run the rate of industrialisation and the growth of national economy would depend on the increasing production of coal, electricity, iron and steel, heavy machinery, heavy chemicals, generally would increase the capacity for capital formation. Therefore, the heavy industries must be expanded with all possible speed.\(^3\)

The strategy initiated by the Second Five Year Plan was to develop the heavy infrastructural industries to pay rich dividends. In terms of output, India today is one among the industrially advanced countries in the world. Steel industry plays a key role in the success of strategy of industrial infrastructure. If the industrialisation policy is to gather further momentum with more intensive pursuit of self reliant development, the steel industry must be expanded continuously in order to sustain this momentum. The significance of steel is based on the fact that, it is linked with forward and backward directions to a large number of other items. Steel products fulfil certain basic needs of the country such as defence and encourages the growth of certain industries by making the raw materials of the later available. These latter constitute its forward links. This linkage encourages the development of an economy.

The crucial position of steel in a modern economy with its numerous forward and backward linkages constitute its rationale. In the absence of developed steel industry, these links would be missing.

\(^3\) Ibid, P-3.
Role of Tungabhadra Steel Products Limited (TSPL) :

Tungabhadra Steel Products Limited (TSPL), a public sector undertaking of Govt. of India, was established on 18th April, 1960 to meet the country's needs for design, manufacture and installation of hydraulic structures, radial gates for construction of dams, reservoirs and hydro-electric power stations etc. TSPL, in the four decades of its service to the nation, has made significant contribution in its own humble way for effective national water management and control. Water is the basic need for development of food production and rapid industrialisation. TSPL has the honour of having contributed substantially in the above two vital sectors of national activity. Development of irrigation and hydro-electric power has assumed vital importance in the nation's growth; hence the design, manufacture and erection of hydraulic structures has assumed an added significance. To fulfil these equipment needs, the TSPL was established at Tungabhadra Dam (Hospet) in Karnataka.4

TSPL has developed vast expertise in carrying out turn-key jobs with national and international standards. The company has been able to supply its products not only within the country but also outside the country. It has executed successfully certain key projects in different states like, Sriramasagar Project (Andhra Pradesh), Narayanpur Project (Karnataka), Beas Project (Punjab), Sardar Sarovar Project (Gujarat), Getalsud' Project (Bihar), Mahanandi Project (Madhya Pradesh), Ghod Project (Maharashtra), Balimela Project (Orissa), Bhadra Project (Karnataka), Owen Falls Extension Project (Uganda), Chukha Hydro-electric Project (Bhutan) etc.

Need for the Present Study :

India embarked upon Five Year Plans in 1951 with a focus on elimination of poverty, achieving the highest rate of economic growth, reduction of regional

desparities in income and wealth and self reliance. Though a modest attempt was made in the First Five Year Plan (1951-1956) to realise some of the above objectives, it was only during the Second Five Year Plan, more emphasis was given on the production of basic materials like coal, iron and steel, power and the building up of heavy industries, specially the machine building industry. The main thrust of the Second Five Year Plan (1956-1961) was to ensure self reliant and to promote the growth of subsidiary and engineering industries for speed of industrialisation in the country.

As a part of this economic plan and policy in India, the Tungabhadra Steel Products Limited (TSPL) came into existence on 18th April, 1960 in TB Dam (Hospet) in Karntaka State, with the noble objectives of removing regional desparities in the growth of iron and steel industry in south India. It is expected to design, manufacture and supply steel products useful for installation of hydraulic structures in the construction of dams, reservoirs, hydro-electric power stations, etc. In view of this, the TSPL has invested huge capital in the form of infrastructure. In view of heavy investment, prudent management of financial resources assumes a paramount importance in case of TSPL. Its financial and operating health depends upon the productive use of every rupee invested in its business. If it itself starts suffering from operating and financial diseases, its numerous backward linkages with the utilisation of raw material resources, such as iron ore, cocking coal, lime stone, dolomite, manganese, etc., and forward linkages with subsidiary and ancillary industries would be very weak with an adverse impact on economic growth and development in India. Thus, the working of TSPL play a key role in the growth of an economy.

However, in recent years, the TSPL has been suffering operational and financial problems like erratic return on investment, poor productivity of financial resources, rising social overheads, administered prices and regulated distribution, underutilisation of capacity, technological obsolescence, etc. In
view of these problems, the TSPL has not been able to achieve the objectives which were set at the time of the formation. Therefore, a need was felt by the researcher to x-ray its working with an intention of exploring the problematic functional areas of the TSPL.

**Statement of the Research Problem:**

The ultimate success of any commercial enterprise whether public or private sector, is reflected through its capacity to add some value to the financial resources employed in its endeavour. In other words, an enterprise is said to be successful provided it has been able to maximise shareholders' or stakeholders' wealth or interest and vice versa.

The poor return on investment (ROI) is not only the effect of poor operating performance and financial performance but will also be the cause for poor financial soundness of the concern in due course of time. If adequate measures for diagnosing its operating and financial health are not made, its very existence will be shaky. Therefore, a study which aims at examining operating performance in terms of cost variables and financial variables assumes a special significance. Hence, the statement of the problem:

"An Appraisal of Return on Investment: A Study of Tungabhadra Steel Products Limited in Karnataka".

**Review of Earlier Literature:**

A review of the earlier research studies relating to working of steel industry undertaken by the researcher at the national and international levels has been with an objective of exploring the real need for the present study and also to make the present study quite distinct from earlier studies.
Jagdish Kumar Agarwal (1975) : In his research work on "Industrial Relations in a Public Sector Undertaking : A Case Study of Bhilai Steel Plant". The aim of this study was to study the industrial productions of Bhilai steel plant.5

Sarojini Gupta (1978) : She conducted a study on "The Iron and Steel Industry in India : A Study of Some Aspects of Productivity". She focuses on certain productivity aspects of the iron and steel industry in India.6

Basant Kumar Jena (1979) : In his research work on "A Study of the Growth of Iron and Steel Industry in India since 1947". The aim of this thesis is to study only the growth rate of iron and steel industry in India since 1947.7

T. Narasimha Rao (1983) : In his research work on "Industrial Relations in Indian Public Sector : A Case Study of Bharat Heavy Plate and Vessels Ltd., Vishakapatnam". He has covered the industrial relations of a particular steel unit.8

Mantun Kumar Singh (1984) : He conducted a research on "Labour Productivity, Wages and Profits : A Case Study of Bokaro Steel Ltd". The fundamental aim of this thesis is how best the labour can be utilised so as to increase the profits.9

Dash Satyanarayan (1988): He has conducted a study on “Pricing Productivity and Planning in the Indian Steel Industry: Issues and Options (India)”. This dissertation attempts to rationalise pricing levels prevailing at different periods of time in the public sector steel industry in India, utilising a model of mixed objectives maximisation.10

Valencia Jesus M. (1988): He conducts a research study on “An Econometric Study of Labour Demand in the Steel Industry”. The thesis tests the applicability of a vintage capital model for understanding the employment of labour in the steel industry.11

Abdul Qayyum Khan (1988): In his research work on “Productivity Trends in the Indian Public Sector with special reference to Iron and Steel Industry”. The main aim of this research work is to study the productivity trends of iron and steel industry in general.12

Suvendu Kumar Das (1991): He has conducted a study on "Labour Productivity in Select Industry with special reference to Rourkela Steel Plant". The purpose of this study was to examine the labour productivity of Rourala steel plant.13

Papajohn, Christine G. (1991): In his research work on “The Diffusion on Competing Innovations in the US Steel Industry”. This study analyses how the firm size affects a firm's investment in new technology.14

Lee Hyung-Seog, (1997): In his research work on “A Comparative Cost Analysis for an Integrated Steel Works for North Korea by Economic Co-operation in Iron and Steel Industry”. The fundamental aim of this work was to gauge how a capitalist market oriented country can co-operate with North Korea in the near future.15

Thus, it is clear from the review of earlier literature that no earlier study has selected TSPL as focal point of study with focus on x-raying its operating and financial performance. Hence, the present study which dealing with the diagnosis of operating and financial health of a key industrial unit working in the public sector of the economy assumes a special significance.

**Objectives of the Study:**

The main objectives of the present study are:

1. To study the growth and development of Tungabhadra Steel Products Limited in Karnataka.
2. To analyse the trend in Return on Investment of TSPL.
3. To analyse the causative factors for the existing trend in the ROI.
4. To evaluate the total cost and its efficiency.
5. To evaluate the factory cost and its efficiency.
6. To evaluate the marketing cost and its efficiency.
7. To evaluate the efficiency of manpower management.
8. To evaluate the efficiency of financial management.
9. To offer suggestions for improvement in the operating and financial health of TSPL.

---

Scope of the Study:

The present study covers the Tungabhadra Steel Products Limited in Karnataka, a public sector undertaking of Govt. of India. It is a case study with a micro focus on all major functional areas of TSPL. For the purpose of examining the trend in ROI and throwing light on its factory efficiency, marketing efficiency, manpower efficiency and financial efficiency of the TSPL, a decade period has been selected. It deals with diagnosis of all functional areas of TSPL such as production, marketing, manpower and financial management.

Sources of Data:

The present study is primarily based on secondary data. The data required for the study was collected from the Annual Reports of the TSPL, TSP News (Quarterly Journal), BYNL (Bharat Yantra Nigam Limited) News for the relevant years. Besides the secondary data, the researcher has collected primary data also through personal discussion with the TSPL staff, TB Dam, Hospet (Karnataka).

Research Methodology:

The data collected from both primary and secondary sources, have been properly analysed with the help of ratio analysis, trend analysis, etc. To make the present study more meaningful, the important technique of financial analysis i.e., intra-firm over all performance analysis has been followed. The detailed procedure followed for evaluating the performance in different facets of management of TSPL has been enumerated at the appropriate places in the respective chapters.
Research Design:

The present study has been arranged in 9 chapters.

1. Introduction: The introductory chapter throws light on significance of the steel industry, its rationale, need for the study, statement of the problem, review of the earlier literature, objectives of the study, scope of the study, research methodology, research design and the concepts used in the study.

2. Tungabhadra Steel Products Limited - A Profile: The second chapter deals with the brief history of iron and steel industry in primitive India, iron making industry during 19th century in India, development of steel industry during Five Year Plans; followed by the origin, growth, objectives, organisation of Tungabhadra Steel Products Limited.

3. Analysis of Return on Investment: The third chapter highlights the picture relating to the return on investment of the TSPL and analysis of the causative factors behind the trend in ROI.

4. Analysis of Total Cost and Efficiency: The fourth chapter deals with the analysis of the total cost and efficiency of the TSPL.

5. Analysis of Factory Cost and Efficiency: In the fifth chapter, the analysis of factory cost and efficiency is made.

6. Analysis of Marketing Cost and Efficiency: The sixth chapter aims at the evaluating the marketing cost and efficiency of the TSPL.

7. Analysis of Manpower Cost and Efficiency: The seventh chapter is devoted to study of manpower cost and efficiency of the TSPL.

8. Analysis of Financial Cost and Efficiency: The eighth chapter aims at x-raying the financial prudence of the TSPL in devising the suitable financial
policy and investment policy in achieving the fair return on investment.

9. **Conclusions and Suggestions**: The last chapter deals with the findings and suggestions for efficient and effective management of the different functional areas of TSPL.

**Concepts Used in The Study**:

1. **Sales**: The term sales includes the components of sales, job done for internal use, interest earned from customers, excess provision of central excise duty written back, revenue due on jobs completed but not billed.

2. **Earnings Before Interest and Taxes (EBIT)**: EBIT is equal to sales minus cost of goods sold and fixed operating cost.

3. **Return on Total Assets (ROTA)**: It is calculated as -

   \[
   ROTA = \frac{\text{Earning Before Interest and Taxes}}{\text{Total Assets}}
   \]

4. **Return on Net Assets (RONA)**: It is computed as -

   \[
   RONA = \frac{\text{Earning Before Interest and Taxes}}{\text{Net Fixed Assets} + \text{Net Current Assets}}
   \]

5. **Return on Shareholders’ Equity (ROSE)**:

   \[
   \text{ROSE} = \frac{\text{EAIT}}{\text{Shareholders’ Equity}}
   \]

6. **Value Added**: It refers to the sales minus materials.

7. **Capital Employed**: It refers to the total assets of the company.

8. **Capital Efficiency Ratio**: Capital efficiency ratio is the ratio of value added to capital employed.

9. **Working Capital Efficiency Ratio**: This is the ratio of value added to working capital.
10. **Total Factor Efficiency Ratio**: It refers to the ratio of value added to factor employment cost plus capital usage cost (i.e. less depreciation)

\[
\text{Total Factor Efficiency Ratio} = \frac{\text{Value Added}}{\text{Factor Employment Cost} + \text{Capital Cost}}
\]

(i.e. less Depreciation)

11. **Fixed Operating Cost**: It is the total of manufacturing overheads, administrative overheads, selling and distribution overheads.

12. **Total Cost**: It is the sum of cost of goods sold and fixed operating costs.

13. **Factory Cost**: It is the sum of material cost, productive labour cost and manufacturing overheads.

14. **Total Risk Index**: Total risk index is a measure of the total risk of TSPL. It is computed as:

\[
\text{Total Risk Index} = \text{Degree of Operating Leverage} \times \text{Degree of Financial Leverage}
\]

15. **Operating Leverage Ratio**: It refers to the ratio of contribution to earnings before interest and taxes.

16. **Proprietorship Ratio**: It is computed as:

\[
\text{Proprietorship Ratio} = \frac{\text{Shareholders' Funds}}{\text{Total Assets}}
\]

17. **Production Value**: It is the sum of sales, jobs done for internal use and revenue due on jobs completed but not billed.

18. **Working Capital**: It is computed as

\[
\text{Current Assets} - (\text{Current Liabilities} + \text{Interest Accrued and Due} + \text{Short Term Loan} + \text{Interest on Short Term Loan}).
\]