CHAPTER - II
CHAPTER II

DESIGN OF THE STUDY AND COMPANY PROFILE

2.1 Statement of the problem

The player in the construction sector are public enterprises, private enterprises, contractors (registered) and contractors (unregistered). These constituents are mostly domestic agencies and foreign agencies in a lesser degree either through collaboration or direct participation. The construction industry is facing stiff competition. Productivity levels and management of projects need greater improvement, if we have to be economical and face competition. Further, there are problems of financing. There is also problem of trained personnel. Indian construction equipment and materials need better quality control and price control. "The task force set up by the Government of India has recommended that it is necessary that the domestic construction companies need to improve to be more competitive".50

Hence, it has become imperative to diagnose the various parameters concerning the construction companies and its health in finance, managerial abilities, R&D efforts, export potential etc. The extent of these problems are intended here in the research study on the basis of a study of a private construction company with industry level comparison wherever applicable.

2.2 Reasons for the study

The seventies of present century witnessed rapid economic development of many developing countries in spite of the oil shock in 1973-74. One could see large inflow of foreign capital either in the form of direct equity participation on

50 Rau A.N., op. cit, P - 44.
setting up industries or foreign loans to boost the investment level.

Due to recent liberalisation and opening our economy globally, "encouragement of foreign investment is likely to result in inflow of about 3 billion over next 3 to 4 years which will help to mitigate balance of payment deficits to some extent, but is likely to have a catalytic effect of bringing into existence projects of anything between 9 billion to 10 billion that again providing boost to housing and construction sector".\textsuperscript{51} Performance analysis of construction companies need a review in the light of changed scenario.

"The construction sector play a significant role for capital transfer from developed countries to developing countries. The end of cold war, the transformation of East Europe and Soviet Union and imminent emergence of common market in Western Europe are events of truly historic significance".\textsuperscript{52}

In the above changed scenario of historic significance, it has become essential to take stock of the present health of the construction companies and analyse their capability to withstand the consequences of the changed environment both domestic and foreign.

Government of India has already made it clear in the 8th plan objectives that a strong and vibrant India cannot be one with financially weak foundation and hence policy correction are needed through structural changes by infusing potentially viable technology, rationalisation of labour and even infusion of resources. How far construction companies can accommodate and grow, is the aim of this study.


\textsuperscript{52} Excerpts from "Objectives, Thrust and Macro dimensions of 8th plan" - Planning Commission Publication, 1991, December.
2.3 Objectives of the study

The objectives of the present study are to arrive at inferences for the construction industry through the study of "Simplex Concrete Piles (India) Limited" a construction company, as follows:

(i) To arrive at the overall performance of the company and financial stability at a given period of time using the "Altman's 'z' score financial model (asset backed) and 'z' score equity model (equity based).

(ii) To analyse the dividend profile of the company and its growth rate, for the period under study and the dividend analysis for the cost of equity share (dividend) in future (based on "Gordon Model").

(iii) To examine the financial health of the company by computing four basic sets of ratios, namely liquidity, activity, debt and profitability ratios and to assess whether the growth rate of aggregate capital employed and borrowed funds is in line with mobilisation norms.

(iv) To compute the elasticity index of the company between employment generation capacity and gross value added to compare with industry level average in order to ascertain the employment generation capacity of the company under study.

(v) To study the position of export earnings, and its uses, and compare with the industry in India.

(vi) To assess the R&D efforts of the company in order to arrive at the level of performance and make necessary suggestions.

(vii) To evaluate the management performance through "Performance Evaluation Model" using linear
discriminant function (LDF) and to assess the status of management techniques, trained personnel and the seriousness on the part of management in tackling the problems and difficulties with the help of structured questionnaire.

2.4 Hypotheses

The Hypotheses of the study are as follows:

i) The financial stability and overall performance are strong in terms of asset backing and performance of the company's equity shares.

ii) The company has maintained stability in the dividend pay out and the status of growth rate of dividend and general reserve to pre & post tax profits are satisfactory.

iii) The financial performance as indicated in their various financial ratios are satisfactory compared to the industry level averages.

iv) The growth rate of aggregate capital employed and borrowed funds during the period of study is in line with the mobilisation norms.

v) The elasticity index of the company during the period under study, between employment generation and gross value added is in line with the construction sector in India.

vi) The status of export earnings and the R&D expenditure are satisfactory compared to industry level.

vii) Management performance of construction industry and the company are satisfactory.
2.5 Methodology

2.5.1 Source of data

The study is based on secondary data. The annual reports of the Simplex Concrete Piles (India) Ltd, Institution of Engineer (India) Publications, National Institute of Construction Management and Research (NICMAR) publications, Brochures and News paper articles on the subject, have been consulted. Details given in Memorandum of the Prospectus of Equity share floated by the company during January 1992 have also been considered. Statistics regarding construction industry in India have been relied on "Indian Economic Information Year Book 1991 - 1992" by A.N. Agarwal et al the Economic Times articles.

2.5.2 Period of study

The study covers the period from 1981 to 1990. For performance evaluation model, the data in the annual report of the company as on March 1991 were used to capture the recent trend in a comprehensive and analytical manner.

2.5.3 Frame work of analysis

i) Altmen's 'Z' Score financial model

This model has been used to indicate financial stability and overall performance of the company at a given period of time. It was found by the author of this model that out of 22 financial ratios, only 5 could be combined to discriminate between the bankrupt and non bankrupt company.

ii) 'Z' Score Equity Model

In this model, the relevant variables of equity such as book value, Earning Per Share (EPS), Price Earning Ratio (P/E) are taken into account for analysis.
iii) Gordon Model
This is based on the assumption that the value of a share is the present value of all anticipated dividends, over an indefinite time horizon.

iv) Performance evaluation model
This model was developed by R.L. Chauhan and Chew-Wei Chiang using linear discriminant function (LDF) analysis to generate the best LDF equation. Based on this equation, the Z score was computed for the company separately for job condition and the management condition, using replies from the General Manager for the structured questionnaires.

The above analysis involved quantitative data being first tabulated and then analysed with the help of the above models. In addition, tools such as percentage growth rate, analysis variance (ANOVA), and regression analysis have been used. Computer graphs and charts wherever suitable have been used to make the presentation more clear and attractive.

2.6 Chapter scheme
The entire thesis has been covered in eight chapters as mentioned below:

The first chapter covers the background, role, managerial inputs, quality and review of literature in the construction industry.

The second chapter spells out the design of the study consisting of reasons for the study, objective of the study, hypothesis, methodology, frame work of analysis, chapter scheme, limitations of the study, scope for future work and profile of the representative company.

Financial analysis of the study of Simplex Concrete Piles (India) Limited, pertaining to its financial stability, over
all performance using Z score financial model and Z - score equity model have been covered in the third chapter.

The fourth chapter deals with financial ratio analysis for liquidity, activity (efficiency), profitability and debt performances along with the resource mobilisation fund performances to compare with the norms envisaged in the Eighth Plan.

The fifth chapter enumerates the analysis of employment elasticity of the company with respect to gross value added of the company to compare with the construction industry in India.

The sixth chapter brings out the export earning and the status of R&D of the company with comparison to industry in India and international level.

The seventh chapter depicts the quantitative performance evaluation based on questionnaires bringing out an insight into the perception of job condition and management condition of the company.

The findings of the present study and suggestions to improve the performance of the construction industry in domestic and international arena, form the essence of the eighth and last chapter.

2.7 Limitations of the study

The data used for this study are directly taken from the published annual reports of Simplex Concrete Piles (India) Limited and the prospectus in the public issue floated by the company in January 1993, in case of study of the company. Therefore, there are inherent limitations. The major limitation is that the figures obtained are as at the end of the year. In some minor cases it was difficult to distinguish between long term and short term debts.
Since the construction is the least researched industry in India, the non-availability of enough reading material pose another limitation for comparative evaluation.

In case of company's annual report, preference shares which can be redeemed any time after issuing a few weeks notice but are not actually redeemed for years are taken as a part of equity. Advance from clients are taken as current liability although some companies treat this as significant form of resources. In such cases, the company's reflections in the reports have been taken without applying discretion.

For detailed managerial analysis, the companies are hesitating to furnish replies to questionnaires and enquiries due to obvious reasons. In such cases, discretion on the analysis is applied and inferences are based on subjective and objective basis.

2.8 Scope for future work

As already stated, the construction is one of the least researched industries in the country, the national Governments and ILO have been the prime movers in conducting surveys and generating data of the construction industry in many countries of the world. Hence the scope for future work is vast. In this research, financial health, stability, employment generation, exports and R&D have been touched through a case study. The further scope for research based on primary/secondary data, on the following agenda may bring more insight into the nitty-gritty of the construction industry and the sector as a whole.

1) The problem of "Time - cost over run" persists in construction industry, contributing less profit margin. Management tools adoption and review for effective project management and monitoring, such as quantified time based work schedule (turn over based, resource plan based, cash flow projection worked out in time based and profitability
projections based) need greater attention to increase the profit margin. The progress made an adoption and implementation with benefits accrued in the construction industry need further study for dissemination of information and improvements.

ii) Time factor of construction is influenced by the constraints (viz) technical, resource and environment, technology, new materials, machinery, money, type of clients, geographical locations, industrial relation, responsive management are some of the variables to the above constraints. Incisive analysis and future study on these variables and its cause - effect relationship will contribute the productivity of construction industry.

iii) Reduction of cost without sacrificing quality is a really difficult task. Value engineering in construction management can be an effective technique to accomplish this. A progressive study on "the cost to value ratio" and the present status of management support and thoughts on value engineering in construction management need no emphasis.

iv) The recommendations of various seminars, round tables, continuing education courses for "Survival through quality" to boost export, throw avenues on the extent of participation and implementation of "national quality policy", training man power/skill formation, quality audit in construction industry need for further study.

v) Energy conservation in construction management is another area which contributes studies on innovation renewable energy technologies for construction, energy conservation strategies and future prospects in the health of the construction industry.

vi) With the present policy of "Liberalisation, globalisation and privatisation" by Government of India and
the progressively decontrolled market driven economy, R&D transfer, adaptation and diffusion in construction industry need periodical study, review, updating for prioritising and performing the time bound targets in skill formation, construction material development and management, construction machines improved productivity and qualitative managerial ability updating.

vii) Study on productivity, safety management, international construction contracting in the light of boosting exports, issues of policies of Government in labour and other thrust areas, environmental variables Vs managerial creativity, issues of construction entrepreneur, emerging demands on the construction industry in the light of "liberalisation, globalisation and privatisation", investment need for employment generation in construction sector, modernisation requirements of construction machinery, construction industries organisational and behavioural aspects, supportive roles of other agencies, professionalisation of functions of construction managers, consumerism and equity, setting up standards, indigenisation and mobilisation of finance for construction industry are some areas to ponder in the future.

2.9 Profile of the company

The construction aspects are multi-disciplinary. Research and analysis of managerial characteristics can be explicitly brought out through a representative construction company and comparing with industry wherever possible. In this research, a study of Simplex Concrete Piles (India) Limited has been resorted for managerial and financial health and the strategies in key areas with a comparison to the industry performances and norms wherever applicable.

The above construction company which is pioneering in the field of pile foundations was promoted by Late H.P. Laneaster
of UK who introduced the simplex system of piling in India. It was incorporated in Calcutta in 1924.

Simplex came under Indian Management in 1947 under the able guidance of Mr. Madho Das Mundhra. This company which began in pile foundation in India and South East Asia has been recognised as a giant in the construction industry today, constantly on the look out for adapting new technologies to meet the demanding needs of the industry.

Today, Simplex continues to strike newer ground, achieving new targets, keeping pace with the fast developing industrial scenario. Simplex handles construction of super thermal power stations, gas based power projects, giant fertiliser plants, petrochemical industries, marine structures, high silos and tall chimneys. Complex underground structures, sophisticated industrial projects of turn key water/effluent treatment plants, housing, road works providing specialised services and sophisticated techniques.

Some of the creditable achievements are the foundations of the Supreme Court in New Delhi, Tata Centre, Salt Lake Stadium, Cyclotron Project in Calcutta, Hotel Taj Coromandel and Shastri Bhawan in Madras. The National Tower in Calcutta and the Fly Overs in Delhi.

Presently the company has 1,200 employees on its pay roll, comprising about 700 men as technical personnel and 500 men as commercial personnel. About 150 professionally qualified managers in engineering, finance and business administration take management responsibilities at the three branch office and three regional offices, besides their Head Office.

Simplex's services have been utilised by most of the leading private and public sector corporates and Government
agencies in India, The company track record is enviable and repeat contracts are regularly awarded to the company.

The company has a comfortable order book position. With contracts already in hand, the value of balance work outstanding is Rs.226 crores as on January 1993 (i.e.) for 2 years of turn over at current level. The company’s expenses in pile foundation and other type of work in Sri Lanka, Abu Dhabi and Uzbekistan is well recognised.

The company was incorporated under the Companies Act, 1913 on 19th December 1924 as a private limited company and converted into a public limited company with effect from 14th August 1992. The company has registered 15 per cent sales growth rate in 1992 – 1993 and 20 per cent there after. Contract profit was projected at 11 per cent of sales. The company has paid dividends at the rate of 45 per cent per annum for the last 5 years from Rs.74.60 crores in 1989 – 1990 to Rs.108.88 crores in 1991 – 1992.