CHAPTER 1

INTRODUCTION

1.1 CONSTRUCTION INDUSTRY IN INDIA

The construction industry is the second largest sector next to Agriculture in India. This industry forms the backbone of the Indian Economy. It not only provides infrastructure for all other industries but is also one of the largest single sectors in the economy on its own, according to gross domestic product (GDP).

India’s new economic policy has opened up new avenues and vistas for the development and growth of various sectors. It is essential that infrastructure development should keep pace with the developmental activities of the other sectors. This has resulted in a lot of pressure on the construction activities.

The construction sector employs over 35 million workmen and creates assets worth over Rs. 20,000 crores. Every year it is estimated that the investment in the construction industry is steadily growing at the rate of 6.5% per year. It contributes more than 5% to the nation’s GDP and 78% to the gross capital formation. Total capital expenditure of state and central Governments will be Rs. 8,62,687 crores in 2011 – 12 from Rs. 1,43,587 crores in 1999 – 2000. The Planning Commission estimated that investment requirement in infrastructure sector will be about Rs. 14,50,000 crores or US $320 billion during the 11th five year plan period (Government of India report of planning Commission, 2006)
1.1.1 Construction Project Management in India

Construction projects are becoming more complex and highly–risky due to cost overrun. These overruns often results in either delay or incompletion or other such difficulties.

The various factors that contribute to the failures can be classified as (i) external and (ii) internal. The external items, such as political impact, natural calamity etc, are beyond our control. Hence the internal factors are only considered for this study, such as human – related factors, project related factors, project procedures and project management actions to find out the variable influencing the cost overrun in the construction on project (Albert P.C. Chan et al, 2004).

1.1.2 Cost Management in Construction Project

Cost management is the process used to control the cost of the project while maintaining the scope of all the deliverables. Therefore the cost management process (CMP) is important to control the expenditure at every stage of a project from its inception through its development, design, execution, final payment and closure of a project.

Cost management or cost control, cannot act independently without the integration with time schedule and quality. Cost and scheduling are closely interrelated because they share a lot of common data in their controlling process.

Cost management also includes resource planning, estimating. The use of resources like men, money, machines, materials, etc. emphasizing on time management is probably the ideal cost management.
In construction cost control may be implemented from the stage of planning, estimating, designing, tender bidding, materials purchase, machinery usage, financial allocation, budgeting and monitoring, men and materials handling etc.

Cost is the fundamental resource of the project. Cost overrun occurs if the project manager is unable to control the project activities efficiently from inception to completion. Ineffective coordination between the client, architects, project managers, contractors and engineering team also contribute to cost overrun. As per Darshi et al (2001) Construction coordination is an important function in the building process.

It is imperative that effective management is essential for the construction industry. This is also cited by Chua (1999), Chalabi (1984) and Ahuja (1980) as ‘Construction industry is beset with several problems such as ineffective time, Cost and quality management practices, communications, performance of the Project Manager and they lead to project delays, cost overrun’.

Most of the Indian contract companies, except very few giants, are not able to achieve the planned programme during actual execution of work at site. Thus, identification of problem areas and the project coordination become an important function in the construction process. Charlel et al (1990) discovered that a cost overrun rate of 1 to 11% is more likely to occur on larger projects than smaller ones.

From initiation to completion stage of a construction project there are different stages and activities quantitatively and qualitatively. So this study concentrates on both quantitative and qualitative analyses. As far as the different quantitative activities, the Cost Management ensures the resources planning of people, materials and equipments and what quantities of each
should be used to perform project activities. So, the Project Cost Management is thus concerned with the cost of the resources needed to complete various Project Activities.

Cost control processes are gradually applied in Indian Industry because of growing question cost awareness (CII 1994, Dissanyaka 1999).

In addition to the above, the cost management of various activities is possible only when efficient Project Managers are involved. Sophisticated Project Cost Management tool along with all management knowledge areas is essential for the cost control of a construction project. The Project Managers are the key stakeholders in a Construction Project and they are analysed qualitatively. Role of Project Management Consultants is very important in construction industry (Gandage 2007).

Okpala et al (1988) identified 20 variables that could cause delays and cost overrun and seven other variables that could result in the escalation of construction costs without necessarily causing delay.

Therefore both quantitative and qualitative analyses have been carried out in this research by collecting data through various survey questionnaires, by conducting personal interviews and the lacuna in various selected project process levels is identified.

1.2 IDENTIFICATION OF THE PROBLEM

In India, the construction activities are increasing day by day to improve the infrastructure facilities like roads, bridges, flyovers, IT Buildings etc. When the budget outlay for the construction activities is huge, even a little savings will make millions of rupees. For developing countries like India, achieving economy by avoiding cost overrun is very helpful. Small
improvement discovered in research for cost reduction will be of great value for the effective management of the construction industry.

1.3  OBJECTIVE OF THE STUDY

   The objective of the study is ‘To explore all the important items contributing the cost overrun and identifying the critical items among them in CMP’.

1.4  SCOPE

   CMP is the function of controlling and managing the expenditure in various stages of a construction project.

   There are five stages in a construction project, viz.:

   (i) Initiating stage
   (ii) Planning stage
   (iii) Executing stage
   (iv) Controlling stage, and
   (v) Completion stage

   The five stages are not individual activities. They are the collection of repeated and overlapping activities that control and manage the project.

   The successful implementation of cost management depends on various factors such as using management tools, techniques, processes and practices.
During the study, 89 important items were identified for cost overrun in construction projects. Out of the 89 items identified, the known 5 items are specifically considered and taken as dependent items to do analysis on the balance 84 items. These 84 items were analyzed, extracted and grouped under 12 categories for analysis of the research study. The status of cost management in India with special reference to medium and major construction projects in the southern states of India is not encouraging due to the fact that the projects are facing more often failure due to cost overrun. Cost management process is integrated in five stages and all the 84 factors associated are considered.

The study analyzes five stages in the construction process with respect to the primary data obtained from the professionals through questionnaires and personal interviews. The indicators obtained from the above analysis are further scrutinised and analyzed with the help of the secondary data resulting in specific solutions.