

## ELEMENTS OF COST OVERRUNS, DELAYS AND RISK IN CONSTRUCTION MANAGEMENT

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### ABSTRACT:

One of the leading contributors to Indian economy i.e. the construction industry is criticized many times for delays in the projects. The delay in the projects effects on track record of construction industry. It also results in low customer satisfaction. On the other hand, the delay in construction projects increases the cost of the project. The industry is coming up with the complicated construction projects with dependencies on skilled workforce. Different requirements are to be fulfilled in the stipulated time frame. Hence the success of any project depends upon two important factors viz. cost and time required to complete the project. The planning of the project with application of the principles like total quality enhancement and supply management will result in better performance of the team to deliver the project. The paper presents the overview of the different parameters affecting the cost and budget and the risks involved in the construction projects.

**KEYWORDS:** Construction projects, cost overrun, delays in construction, risk in construction projects, etc.

### INTRODUCTION:

The developments of the structures are resulting in evaluation of the construction industry to face the challenges in optimization of the resources, cost and time required for the construction project. The need for the time is to overcome the problems associated with the construction management. The upcoming civil structures are more challenging to construct than the ancient ones. There are different skilled experts required to complete such projects. The division of the work helps each team to concentrate specific task at a time. It not only saves the time but also enhances the quality of the work done. It helps in the actual time frame completion of the project and also reduces the cost involved. The study presented in this paper is divided in to three important parts to enhance the performance of the construction projects:

- Delays in construction projects
- Cost overruns
- Risk involved

We are investigating the different parameters of each one of the above stated causes of failures in construction projects. The planning in the project is most mandatory and important stage. With proper planning and considerations of the causes of failure and the factors affecting it can help in successful completion of any construction projects.

### Delay & Cost Overrun in Construction Projects:

- **Delay:**

There were several examples in India where, the construction industry has failed in completion of the project in stipulated planned time. The customer who has paid for the project is the sufferer in this case. The delay in development of the required structure may also result in delay in the further development plans. Following fig.1 showing the causes of the delays in construction projects:

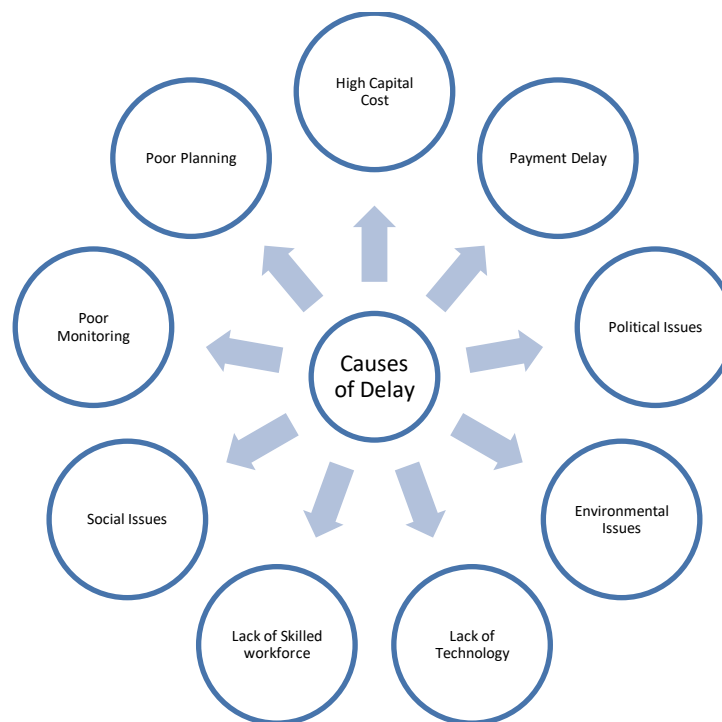


Fig.1: Causes of delays in construction project

The instruments with upgraded technology will help in reducing the time required for completion of the activities. The skilled workforce if not available can result in increasing the time needed.

Sometimes, the environmental issues like lack of water, heavy rainfall or earthquake can effect on the construction projects as most of the sites are not having the proper arrangements to overcome these problems.

A planning of the construction activities helps in arranging the resources required for effective work.

The mega projects are having very high capital cost. In such projects, the delay in bill submission or receiving the amount results in heavy shortage of money and finally delays in the project.

### Cost Overrun:

Cost overrun is simply the expenditure over the budgeted cost. Most of the times, the cost and time goes hand in hand. Either the increase in material cost or some process cost may results in delay or the delay results in cost overrun for the construction project.

The cash flow must be maintained during the construction activities as the labor wages and the material cost has to be paid continuously in order to continue the work. Figure 2 drawn below shows the causes of cost overrun in construction projects.



Fig.2: Causes of Cost Overrun

If the estimation of the cost is wrong it is definitely going to create the trouble as the actual cost of the project may be very high in that case.

### Risk Management in Construction Projects:

Construction industry is facing the various issues daily. The risk in the construction projects is due to the competitors, risk in recovery of investment, low profits, disputes, and safety issues, etc. Depending upon the possible situations and probable risk taking ability of the company, planning will be done to start with the project.

The risk management plan and the steps involved are shown in figure 3 below. The identification of the problems those can arrive during the project from starting to final delivery phase. The plan includes the possible impact of the problem if it arises. Depending upon the impact, the complete what measures can be taken are decided. Finally the contingency plan is prepared for the project. The project will only be successful if the complete consideration of the risk involved and the possible issues to be addressed during the project development stage. All the possible solutions to the problem must be studied and the feasibility study must be carried out to overcome the problem.

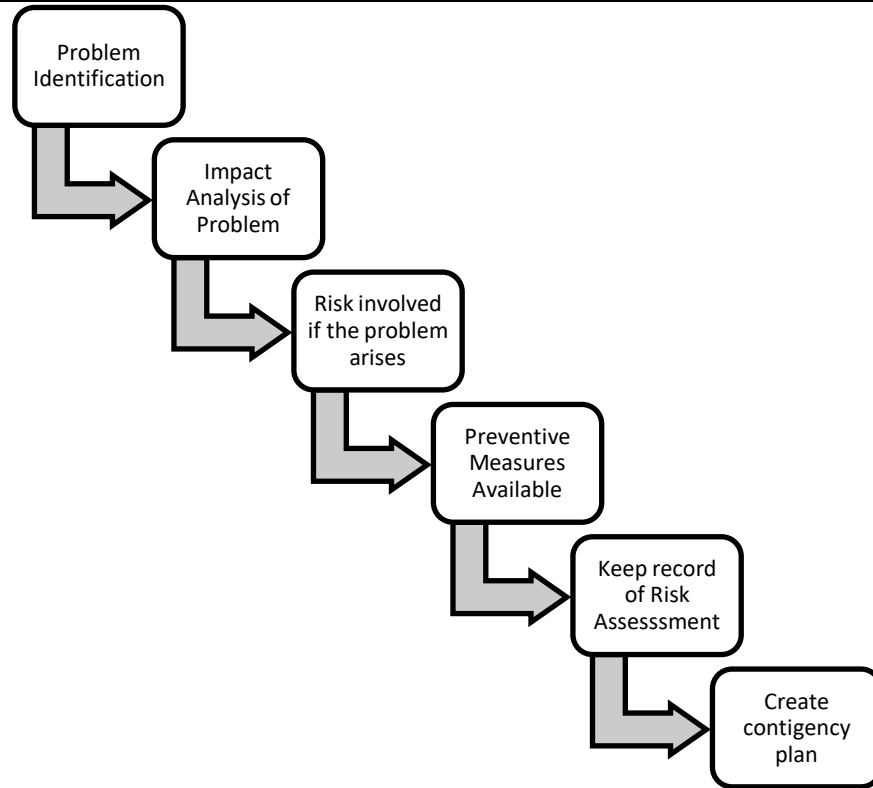


Fig.3: Identification of the risk involved and the preventive plan for the construction project

## CONCLUSION:

The delays in the construction projects results in cost overrun for the project. If the cost of project increases than forecasted then there are chances of complete failure of the project as most of the agreements are considering the forecasted cost of the project. Authors have presented the overview of the various factors affecting the delays, cost overrun and the risk factors associated with the construction projects. The construction planned and manager has a critical role to play in order to overcome the delays. The chain management and the quality management are the important processes to be followed to enrich the project completion with cost effectiveness.

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