Analysis of Cost & Schedule Overrun in Construction Projects

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***ABSTRACT*: The aim of the present study was to investigate the increasing frequency of cost and time overruns on construction projects, and to provide recommendations for addressing the situation. Identification of the distribution and trends of the cost overruns and time delays of contracts. Analyses for identifying the factors that significantly influence cost overruns and time delays. To rank causes of cost and schedule overrun based on their frequency index, severity index ad importance index. To check accuracy of collected data using statistical method. Implementation of EVM method to check performance of the project. To assess which causes need the most attention by stakeholders.**

1. INTRODUCTION:

A commonality among construction industry is the inability to complete projects on time and within budget. This is a chronic problem for the construction industry due to factors such as design errors, unexpected site conditions, increases in project scope, weather conditions, and other project changesAs the construction industry continues to grow in size, so do planning and budgeting problems. This is because it is common for projects not to be completed on time and within the initial project budget. In fact, it is one of the most important challenges facing the construction industry today. An out of control construction cost adds to investment pressure, increases construction cost, affects investment decision-making and wastes the national finance.

1. To assess how frequent each of these causes occur.
2. Development of a set of recommendations to help construction industry manage the problem of cost overruns and time delays.

2. OBJECTIVE:

1. To identify future expenditure in a business to reduce budget overages.
2. To tackle challenging task in business management, to reduce construction delay.
3. To improve pricing decision.
4. To identify maintenance of a central record of all predicted expenses & costs.
5. Analysis of expected cost to control project expenses.

3. LITERATURE REVIEW:

Aftab Hameed Memon (2012)

This study assessed the time & cost performance projects in Malaysia using structured questionnaire survey. The finding of study revealed that 92% of construction projects were overrun & only 8% of project could achieve completion within contract duration. The major contributors of this poor performance include design & documentation issues, financial resource managements & contract administration issues. Future, qualitative study was carried out using semi-structured interviews with the experience personnel involving in managing construction project which resulted in developing 13 mitigation measure to improve time performance & 15 mitigation measure cost performance in constuction project.

Mr Mandar Borse & Prof. Pranay R. Khare(2016)
Time and cost overruns is a severe problems faced by large construction industries in India. It is resulted from various factors which had been identified in this study.

It was found that most significant factors causing time and cost overruns in Indian construction are material market rate, lack of planning, slow decision making, raising of fund, contract modification, project location, depends on the fresher's to bear the whole responsibility for time overruns and high transportation cost, change in material specification, escalation of material price, frequent breakdown of construction plants and equipment's, and rework for cost overruns. So this implies that a need of urgent attention is to be put on these factors to avoid time and cost overruns. Construction industry need to be aware of planning. New techniques need to be introduced to reduce problem responsible for time and cost overrun in construction projects.

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Delays and cost overruns have significant implications from economic as well as political point of view. Due to delays in project implementation, the people and the economy have to wait for the provisions. Public goods and services longer than is necessary. Thus,delays limit the growth potential of the economy. Similarly, cost overruns reduce competitiveness of the economy. Infrastructure projects serve as input for other sectors of the economy. Cost overruns in these projects lead. Reduce the efficiency of available economic resources and limit the growth potential of the entire economy.The results and conclusions are relevant to all infrastructure projects, regardless of the sector and the project type.

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Cost overrun are the most common factor and predominant in road construction projects in India. And during these study efforts was taken to find out the most critical factor which was mostly influencing the Indian road projects. So a questionnaire survey was made across various Government and private organizations. From the study it was observed that many respondents mainly focused on completing the project within the budget to control the cost overrun. The most predominant factors from the study are based on respondents perspective which includes the issues in land acquisition, cost escalation of workers' wages and material, financing and payments for completed works (delays in payments), Force majeure (act of god), design changes during construction phase, delays in shifting existing utilities, increase in quantities of materials due to actual site conditions, non-availability of construction materials, design errors, unstable or increase in interest rates. To verify the accuracy of results made from the questionnaire survey, two different methods for analysis were used during the analysis of study. And those methods are relative importance index method (RII), and mean value method (MV).

4. DATA COLLECTION

These various number of factors were concluded to be made part of questionnaire survey. This survey was developed to gain various data which were the cause of cost overrun in construction industry, so it was demanded to rate those initially identified factors accordingly to their severity. Factors are listed below,

1. Proprietor or Owner related
2. Consultant related
3. Material related
4. Workers or Labours related
5. Design related
6.Other External Factors
7. Builder related.

The survey was distributed o thirty member of top & middle management of private construction firm. The responded involved in this survey are civil engineer contractors , owner who were working in construction industry. Out of 30 questionnaires, 21 responses were received.All respondents were well experience officials in construction industry.

5. CONCLUSION-

From above analysis it is concluded that

Some of the point which is affect the Delay in construction, overrun in construction, time management.

The points are: -

1. Instrumental & Manual Errors during construction.
2. The inflexibility of Consultant.
3. The communication between Design & Construction parties.
4. The require material available in the local market on time.
5. The supervision & management on site.
6. Financial problem.
7. Construction method implemented by contractor.
8. Weather problem.

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