

A STUDY OF CAUSES OF DELAY AND PRICE OVERRUN IN OFFICE CONSTRUCTION PROJECTS

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ABSTRACT:

Delays and cost overruns are major frequent problems in the construction industries of many developed and developing countries all over the world. The purpose of this paper is to evaluate factors leading to time overruns and cost overruns in construction projects. Construction is a commercial or we can say concerned process which is very preceptive to changes and dependent on market parameters. It is because of these factors that changes are orders of the trade. Usually it is Time overrun that leads to Cost overrun because time is money; it is absolutely true in construction industry Delay in projects happen somewhere during the construction process, and a few even at the purpose of completion of a construction project. The project-team comes together to make that unique development on a specific site under circumstances which will never be repeated.

They may be intricate, insist high level of co-ordination of permissions, people, goods, plant and materials and construction can begin despite many uncertainties, and as a consequence, delays are common. The important reasons for cost overruns contains price waver of construction materials, contractor delays in material, equipment delivery status, and inflation. The outcome of this paper will help owners, contractors, builders and consultants in understanding the reasons for delays and cost overruns, thus eliminating and minimizing these causes for better projects construction. This could be achieved by better management of the projects and by finding new methods for storing the critical materials from the start of the project. Furthermore, the local government is advised to initiate legislation to overcome problems arising from monopolies in the supply of construction materials. With the help of this paper we will find the major issues related to cost delay and overrun in construction and to do a questionnaire survey in which we have to take out the ranks of particular item which is responsible for construction delay and cost overrun in projects. And further take necessary initiatives to resolve that factors.

KEYWORDS: Construction projects, Cost delay, Cost overrun, Questionnaire survey, Cost management

1.INTRODUCTION:

Construction is the process of making something, the occupation of building. An example of construction is the art of making homes and residential buildings. Construction covers the processes implicate in delivering buildings, infrastructure and industrial dexterity, and associated activities through to the highest of their life. It typically starts with planning, financing, and elegance, and continues until the asset is formed and ready for use; construction also covers repairs and maintenance work, any works to expand, extend and improve the asset, and its eventual demolition, dismantling or decommissioning. As an industry sector, construction accounts for quite 10% of worldwide GDP (6-9% in developed countries) and employs around 7% of the worldwide workforce - over 273m people. The output of the worldwide housing industry was worth an estimated \$10.8 trillion in 2017.

Construction means the building of something. This can mean the building of anything from motorways, to an office block, to a brand new cinema. It is happening all around us, all the time. The bigger the project, the longer it'll fancy build, so some construction could last a couple of weeks, and some could last a few years. There is many diligence involved in constructing a building and there are various different stages. Construction delays in residential buildings, abiding building and lightweight construction are often the results of miscommunication between contractors, subcontractors, clients and property owners. These kinds of misunderstandings and unrealistic expectations are usually avoided through the use of detailed critical path schedules, which specify the work, and timetable to be used, but most significant, the logical sequence of events which must occur for a project to be finished. Construction delays in projects are frequently high priced, since there's usually a construction loan involved which charges profit, management staff dedicated to the project whose costs are time dependent, and ongoing inflation in wage and material prices.

A construction project may require a really large or small workforce, counting on the dimensions of the building project. No matter what the dimensions is, there are many different jobs to try to to, requiring many various skills. On a construction site, everyone is liable for doing their own job using their own skills. On one construction site there might be over 50 men and ladies all doing different jobs like a roofer, engineer, electrician, plumber and lots of more. Not all the members of the workforce are going to be supported site either; some could also be driving on the road delivering supplies or back at the office planning the construction. Because there are often tons of individuals performing on a construction site at just one occasion, there's tons happening all directly. Building also requires many various sorts of equipment, starting from small tools to large equipment like vehicles. If not used correctly, both of those sorts of equipment are often very dangerous to the person using it and also everyone else around them. This is why safety is usually the first specialise in a construction site.

2-LITERATURE REVIEW:

Ahmed Hussain(2015) has explained cost overruns and delays in Qatari public construction projects. The data collected from Qatar public work authority ashghal includes 122 public road, building, and drainage projects. ANOVA method was used for data analysis and inference. Regression analysis was used to establish the relationships between contract prices and cost overruns and to predict models for calculating overruns. Based on the analysis, the cost overruns and delays were not significant at a significance level of 0.05 with respect to project type category and size. He had explained the prediction of cost overrun using data mining classification algorithms. This model used only numerical data for predictions with lower precision and recall. Modeling results found that a stacking model that combined the results from several classifiers produced the simplest results. The model developed has a mean accuracy of 43.72% for five model runs.

Ismail Abdul Rahman et al.(2013) had focused on the effect of various factors on budget overrun in construction projects in Malaysia. In this a quantitative method is used for data collection using structured questionnaire survey amongst contractors, consultant and clients. The data was analyzed with an advanced multivariate method of structural equation modeling with PLS approach using Smart PLS software. The analysis showed that all the constructs in model contributes significantly to budget overrun with R2 value of 0.623. He focused on micro-scaled construction companies. The data was collected through questionnaire survey within 136 companies .Reliability and ranking method was carried out for data analysis .According to him design factor plays the most critical problem for cost overrun. The findings of his study can help micro-scaled construction companies to know and prevent the root causes of cost overrun. He done analysis of cost overrun on Malaysia based construction companies. A set of written questions was done by quantity-surveying consultants was undertaken to get project characteristics and price performance data, in reference to a sample of 359 recently completed construction projects. Data was analyzed based on, project sector, contract values, type of project, procurement route, nature of projects and tendering method used for analysis. The findings offer stakeholders descriptive statistical cost performance information in reference to these characteristics. The data was analyzed through regression and descriptive analysis.

Mulenga mukuka et al.(2015) discussed the effect of construction schedule overrun in Gauteng construction projects in South Africa.The data was derived from both primary and secondary sources. The primary was well prepared questionnaire and the secondary data includes detailed literature survey. MIS method was used for data analysis. The study concluded that extension of time, loss of profit, dispute, poor quality of work, claims, delays are the major criteria for project schedule overrun. Extension of time ranked 1(SD=0.829) and the last rank goes to loss of skilled employees (SD=1.077). Ghulam Abbas Niazi et al. (2015) identified the significant factors that lead to construction cost overruns in himachal Pradesh The questionnaire was circulated to 75 construction practitioners, including clients, consultants and contractors. Causes are determined based on different categories such as contractor, client, ,labor, material and equipment's and external things .RII (Relative Importance Index) method was used for

analysis. According to them Corruption was ranked as first major contributor of cost with a RII value of 0.89. Corruption constitutes a serious threat to the HP Construction Industry being able to improve because it has a serious effect on construction cost growth.

3-CONCLUSION:

Cost overrun are the most common fact or 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 Construction projects. So a questionnaire survey was made across various Government and private organizations. From the study it had been discovered that several respondents in the main centered on finishing the project at intervals to manage the price 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).

The overall result shows that most important of the causes of time and cost overrun in the office building construction projects. In order to minimize these causes, owners should have an available fund for project and pay in time to the contractors. On the other hand, contractors should have strong backing from financial institution and be financially sound. The cost of individual construction projects must be accurately estimated and any potential project risks which will cause cost and time overruns are to be adequately identified and managed accordingly. Moreover, human resources should have good training in managerial and technical aspects of the construction projects. These programs can update participants to possess good practice in planning, coordinating, controlling and monitoring of resources in scheduled time. Finally, recommendations are made to substantially minimize the impacts of those critical factors causing delays and price overruns. It is difficult to differentiate what proportion of the general delay source is which party's responsibility. Blaming each other on who causes delay is not very helpful and a lot of work is expected to be done by each of the parties in order to minimize the problems of time and cost overruns in office building construction projects.

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