

A REVIEW PAPER ON: DELAYS OCCUR IN CONSTRUCTION PROJECT IN RESIDENTIAL AND IN COMMERCIAL BUILDING

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ABSTRACT

Time, quality and economy constitute the three main factors in a construction project, of which time plays a significant role in construction. The construction industry is large, volatile, and requires tremendous capital outlays. Delays occur almost in every construction project and the significant of these delays varies considerably from project to project. Delay in any task or operation is a time overrun which influences the completion of the work. The common problems in civil engineering projects all around the world are mainly due to delay in construction. To analyze the reasons for the delay, the researcher conducted an evaluation of time performance of the construction project, adopting the questionnaire, in addition to what was found in previous studies, so as to achieve the main objective of this study.

The researcher conducted a systematic search, in a questionnaire to obtain data on the reasons of the delay and then, analyzed the study objectives, which have been successfully achieved.

1. INTRODUCTION

OVERVIEW OF DELAYS IN CONSTRUCTION

Delays are one of the biggest problems facing by the construction industry. The delays in construction projects have significant financial and social impact to all parties involved in the projects. Construction delay is a major problem facing by the construction industry. In most construction projects, there are delays and their impact level varies from project to project ranging from a few days to years. It is generally understood that the construction delay is the most critical factors affecting to deliver the project in time, within budget, and expected quality. It can be found rarely that a project was completed within the specified time.

Delay in construction can have a number of consequences in a project, such as late completion, lost productivity, acceleration, consequential damages; increased cost and contract termination. When project delays are unexpected they hardly manageable and have rather negative impact on the project activities and outcomes. The delay in study research through the previous case studies and also study has been taken from live projects.

Problem Statement

Construction industry is facing a lot of problems one of the biggest problems in the delay time as the construction industry has a poor record with regard to the completion of projects on time. Damage and delay occurs in all areas of the project and prevail on all the parties involved in these projects.

Failure to achieve target time leads to a lot of problems, including increased costs included in the budget and increased costs to the contractor, such as wage labor and equipment and change of the costs directly and indirectly.

2. LITERATURE REVIEW

H.M. Al-Humaidi (2010) classified the causes of delay as procedural, enabling and triggering causes of delays. He further developed a model to assess the likelihood of the project delay. Evaluation of the model was performed for applicability and adequacy of the model. Procedural delay classified as managerial, financial, operational and legal. Enabling delay classified as material related, equipment related and labor related. Triggering delay classified as weather, underground conditions, natural disasters.

Reviews done by **Assaf, Sadi A. Al-Hejji. Sadiq** (2006) defined fifty six basic causes of delay in huge construction projects. He grouped the delay causes into nine (9) basic groups with dissimilar levels and dissimilar parties. As he concluded, out of hundred percent 76% project developer have specified that average of delay is between 10 percent and 30 percent (10%-30%) of original duration. And twenty five percent of construction consultants (advisors) have specified from 30 percent to 50 percent (30%-50%) average time delay. According to his research survey owners explains that cause of project delays are related to labors and contractors Research identifies that consultants and clients realize that giving the contract for the list (lowest) bidders is the most frequent cause of delay, while, construction contractors thought as owners are severe reason of delay.

Dinesh Kumar R (2016) studies on Causes and Effects of Delays in Indian Construction Projects and the paper aims to find out the most significant Factors causing delays in Indian construction projects through literature review and questionnaire survey. This paper conclude that most significant factors causing delay in the construction, inadequate contractor's work & experience & their poor risk

Tushar Khattril. Sohiti Agarwal², Vaishant Gupta³, Mukesh Pandey ⁴(2016) addresses the most noteworthy variables and groups to reasons for delays. by using Important Index (IMPI) method and they listed the most critical top ten cause of delay as follows 1) Delay in material supply, 2) Price Variation, 3) Robberies at project site, 4) Less quality Material, 5) Delay in material inquiries 6) Un reliable sub-contractor. 7) Poor productivity workers. 8) Critical weather condition. 9) Variation in specification and material at working time. 10) Delay in providing services from utilities

Another study was by **A.A. Aibinu et al.** which state that delay is a situation when the contractor and the project owner jointly or severally contribute to the non completion of the project within the agreed contract

period. Normally, delays in construction projects are expensive since there are a lot of additional cost involve in a projects because of the project delay. And this cost will increasing if the project continuously delay by the time.

In another research, **Odeh and Battainch** carried out a study to determine the most significant causes of construction delays with traditional type of contracts with regard to contractors and consultants. According to the results showed that, the top ten most significant causes of delays are owner interference, inadequate contractor experience, financing and payments, labor productivity, slow decision making, improper planning. and subcontractors The studies were carried to figure out the main causes of construction delay.

Battaineh et al. (Battainch1 2002) survey stated that the most significant cause of delay in the traditional type of contract, in perspective of contractor and consultant. It is also stated that to imparting the economic feasibility of capital project, extensive delays provide a fertile ground for costly deputies and claim. The result indicated the contractor and consultant agreed that owner interface, inadequate contractor experience, finance and payment, labor productivity, slow decision making, improper planning and subcontractor are among the top ten important factor

In Florida, **Ahmed et. al. (Syed M. Ahmed 2003)** identified the major causes of delay in building construction industries. The primary aim of this study is to identify theperception of the different parties regarding causes of delays, the allocation of responsibilities and the different types of delay. It was found that, the consultants play a very important role in design-related delays because they are in charge of the design process in conjunction with the owner of the project. Furthermore delayed in payments categories do not have the same negative impact on project .

Frank D. K. Fagar and Adwoa B. Agyakwah Baah (2010), In Ghana construction project, the relative importance that cause delays from that all the three parties namely owner, contractor and consultants are respondents for the questionnaire survey. From this important 32 factors are identified and analyzed based on relative importance index (RII). This study showed the top ten factors that causing delay in construction are: [1] Delay in honoring certificates. [2] Underestimation of the costs, [3] Underestimation of the complexity, [4] Difficulty in accessing bank credit. [5] Poor supervision, [6] Underestimation of time factor completion of projects by contractors, [7] Shortage of materials, [8] Poor professional management, [9] Rising cost of materials, [10] Poor site management. In this study, 32 factors are categorized in nine groups. The results shows that the financing group was the most influential factor causing delay and scheduling & controlling were considered as second most important factor and so on.

Gunduz et al (2014) proposed to provide decision support tool that uses fuzzy logic incorporation with relative importance index to measure the probability of delays factors in construction projects before bidding phase. With the help of literature review and interviews, the authors came out with 83 delay factors classified into 9 groups on based of literature review. Using relative importance index to rank responses of Interview questionnaire filled by 64 experienced construction professionals to assess delay factors importance with 5 points Likert Scale that resulted in top 5 factors Lack of experience of contractor, Deficiency in planning and

scheduling, Poor site management and supervision, Changes to the project by owner, Delays due to material delivery.

3. CONCLUSION

Delay is a major and complex issue in Indian construction projects and causing continuous damage to the industry. It is a very hard task to reduce the delays. However, it can be controlled by accurate and timely precaution. The output of the construction delay is time overrun and cost overrun. Therefore, the GDP of the country is affected by project delays. Based on the literatures, the types and causes of delays have been identified. Although different researchers from different area study the cause delay in a construction project, some of the explored delay causes are similar. So, based on different literature study many delay causes were placed under different groups with their different subgroups.

This section summarizes the conclusion based on the obtained results in before chapter. . This research is intended to identify factors affecting Delays in construction project. The ranking of factors is calculated using Relative Importance Index (RII).

Forty-seven factors considered for the study were in six different groups" i.e. financial related, design related, act of god, management related, construction related, Social and behavioral Related. The total thirty one questionnaires were distributed. Project manager, site engineers, contractors have vast experience in construction;

4. REFERENCES

- [1] **H.M. Al-Humaidia and F. Hadipriono** The fuzzy logic approach to model delays in construction projects using translational models; Civil Engineering and Environmental Systems Vol. 27, No. 4, December 2010, 353-364.
- [2] **Assaf SA, Al-Khalil M, Al-Hazmi M.** "Causes of delays in large building construction projects." ASCE J Manage Eng. 1995; 11(2):45-50.
- [3] **Dinesh Kumar R** "causes and Effects of Delays in Indian Construction Projects" ,International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056, Volume: 03 Issue: 04 Apr-2016 www.irjet.net p-ISSN: 2395-0072.
- [4].**1,Tushar Khattri, 2.Sohit Agarwal 3. Vaishant Gupta 4. Mukesh Pandey** "Critical Causes of Delay In Construction Project In Jhansi Region", International Research Journal of Engineering and Technology(IRJET) Volume: 03 Issue: 10 Oct-2016
- [5] **Battainch1, A. M. O. a. H. T. (2002).** "Causes of construction delay: traditional contracts" International Journal of Project Management (20): 67-73.

- [6] **Syed M. Ahmed S. A. Pragnya Kappagantula, and Dharam Gollapudi (2003).** Delays in Construction: A Brief Study of the Florida Construction Industry. ASC Proceedings of the 39th Annual Conference Clemson University Clemson, South Carolin.
- [7] **Frank D. K. Fugar and Adwoa B. Agyakwah-Baah (2010),** "Delays in Building Construction Projects in Ghana". Australasian Journal of Construction Economics and Building.
- [8] **Gunduz, M. Nielsen, Y., and Ozdemir, M. (2014).** "Fuzzy Assessment Model to Estimate the Probability of Delay in Turkish Construction Projects." Journal of Management in Engineering, 31(4): 04014055.
- [9] **Prakash Rao and Joseph Camron Culas (2014)** "Causes of delays in Construction Projects- A case study". International Journal of Current Research.
- [10] **Dolo H., Sawhney A., Iyer K.C. and Rentala S.(2012)"**Analyzing factors affecting delays in Indian construction projects", International journal of project Management, Volume 30, Issue 4, Pages 479-489
- [11] **J.Raj Bharath & Prof Siddesh K Pai (2013)** "Analysis Of Critical Causes Of Delays In Indian Infrastructure Projects" International Journal of innovative research & development, vol2 issue3, 251-263