

Review of Delay Factors and Affecting the Construction Projects

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Abstract: Construction delays are distinctive one in each of the biggest problems construction firms face currently every day. The analysis presents the results of the questionnaires survey conducted to spot and conclude the relative importance index of the necessary factors tributary to construction delay in construction project. so probabilities of construction delay in constructions comes are minimize and cut back the assorted effects on completely different project during this study forty one dissimilar factors of Construction delay were elite when the past review of literature are heavily plagued by causes of construction delay if anybody doesn't is aware of that are the factors that causes delay then they can't be succeeded. The project investigated during this study enclosed residential building, edifice comes and high rise building .In this analysis the project team members i.e. owner, contractor, consultant, engineers and design etc. are taken for form survey to get the delay factors and analysis to spot the most causes and effects of delay in construction field.

Key Words: Delay, Causes of delay, Effect of delay, Construction Survey, Relative important index.

I. INTRODUCTION

Construction industries are all told one amongst one in every of growing business in all over world. In construction comes time and value overruns are known jointly of most vital factors to blame for abandonment. Delays and disruptions are challenges faced by industry. The aim of this study is to review past studies on decisive the factors that are to blame for delays. In most countries biggest consumer is government. (Okpala and Aiekwu), to dislike of personal business, several government project expertise delay then exceeds initial time and value estimates (Odeh sand Bataineh). Indian industry has gained much more importance in recent times thanks to gap of Indian markets and also the arrival of mega comes for infrastructure development the performance of Indian construction comes. Delay may be a state of affairs once the particular progress of a construction works is slower than the planned schedule or late completion of comes. Delay is classed into two types: Non-excusable & Excusable. Once the contractors are to blame for the reason behind the delay, called non-excusable delay. Excusable delay is any classified as paid and non- paid delay. The first objective throughout the development method is to finish the project on time and at intervals the budget, whereas meeting established quality needs and alternative specifications. However, in some cases, delays throughout the development will produce immense value damages and ensuing the project parties taking legal proceeding against one another through a construction claims. To live the performance of comes, the no. of comes achieved their goal and no. of comes that doesn't is analyzed. to boost the performance of project if we tend to may management the only most vital issue of regular delay, the price step-up are often ultimately contained .This paper studies performs the continued and completed mega project.

II. OBJECTIVES

The main objectives of this study include the following:

- 1) To identify the causes of delays in construction in India
- 2) To identify the approaches for solving the problems regarding delay
- 3) To minimize the effect of delay in construction project

III. METHODOLOGY

In this paper, general focus has been created on the delay factors. The objective of this study is to identify the major cause of delay in the construction project and access the relative importance of these causes, from the aspects of construction contractors and consultants. The study was performed on the basis of questionnaire, divided into two main parts. Part one related to general information for both the company and respondent. Both contractors and consultants were further requested to answer the questions pertaining to their experience in construction industry. Part two includes the list of identified causes of delay in construction industry on the basis of questionnaire distributed randomly to contractors & consultants working in construction projects, response were collected & analyzed. The knowledge gotten within the survey was poor down by Relative Importance Index (RII) technique.

IV. CAUSES OF DELAY

The most frequent causes of delay as per because the building owners, contractors & consultants area unit listed below. From the house owners purpose of read most frequent causes area unit associated with each contractors and labors. From the points of read of contractors the foremost causes of delay area unit associated with the house owners. Typically it's seen that the majority owner award rock bottom bidder to execute their comes, rock bottom bidders area unit unqualified contractors with shortage of resources and low capabilities, that cause low performance and cause delay in project completion.

A. *The Most Severe Cause Of Delay Are As Follows*

- 1) Delay in assessing / evaluating major changes in the scope of work
- 2) inadequate site investigation
- 3) Delay in reviewing and approving design changes
- 4) Delay in performing inspection and testing
- 5) Delay in preparing interim payment certificates

B. *Delays Causes As Per As Consultants Are As Follows*

- 1) Contract Management
- 2) Preparation and approval of drawing
- 3) Quality assurance/ control
- 4) Waiting time for approval of tests and inspections
- 5) Inadequate supervision to contractor
- 6) Delay of work approval
- 7) Late issue of instruction

C. *Delays Causes As Per As Contractors Are As Follows*

- 1) Financial indiscipline /dishonesty
- 2) construction methods
- 3) poor site management and supervision
- 4) poor procurement of construction materials
- 5) Absenteeism Inadequate contractor experience
- 6) Incompetent project team
- 7) Inappropriate

D. *Delays Causes As Per As Client Are As Follows*

- 1) Change orders
- 2) Delay in payments
- 3) Changes in material types and specifications during construction
- 4) Slow decision making
- 5) Unrealistic contract duration
- 6) Delay in approving design documents

E. *Delays Causes As Per As Labour Are As Follows*

- 1) Shortage of labour supply
- 2) Labor Productivity
- 3) Equipment Availability and Failure
- 4) Weak motivation
- 5) Lack of skilled labour
- 6) Presence of Unskilled Labor

F. *Delays Causes As Per As External Are As Follows*

- 1) Unfavorable weather conditions
- 2) Regulatory Changes and Building Code
- 3) Problems with Neighbors

- 4) Delay in manufacturing materials
- 5) Legal Dispute Between Project participants
- 6) Unforeseen Ground Condition

V. EFFECTS OF DELAY

Different types of effects arising due to delay and extension of project works are as follows:

- A. Compensation of imposed tax by owner due to delay attributed to contractor.
- B. Reduce the efficiency of available economic resources.
- C. Reduce the competitiveness of the economy.
- D. Claim for price an increase of resources by the contractor when the work is not completed in time and extensions are to be allowed because of owner's default.
- E. Limit the growth potential.
- F. Claim for loading of resources by the contractor due to delay by owner.
- G. Whenever, a contractor does not do the work with due diligence or his rate is slow, the running bill amount may be withheld leading to claim for interest on withheld payment.
- H. From the finance point of view, if owner delays in payment of completed work it is going to affect the further work of project.

VI. CONCLUSION

The following points can be recommended by all of the participants in order to minimize and control delays in construction projects:

- A. Pay progress payment to the contractor on time as a result of it impairs the contractor's ability to finance the work.
- B. Minimize amendment orders throughout construction to avoid delays.
- C. Avoid delay in reviewing and approving of style documents than the anticipated.
- D. Check for resources and capabilities, before awarded the contract to very cheap bidder.
- E. Shortage and low productivity of labor: spare variety of labors ought to be appointed and be intended to boost Productivity.
- F. Financial and income problems: contractor ought to manage his monetary resources and arrange income by utilizing Progress payment.
- G. Planning and scheduling: they're continued processes throughout construction and match with the resources and time to develop the work to avoid cost and disputes.

REFERENCES

- [1] Kumaraswamy MM, Chan DW.(1997) A comparative study of causes of time overruns in Hong Kong construction projects. International Journal of Project Management ; Vol 15, Issue (1)
- [2] Assaf SA, Al-Khalil, Al-Hazmi. Causes of delays in large building construction projects.(1995) ASCE Journals of management and engineering ;Vol 11 Issue(2)
- [3] Baldwin J.R., Mathei J.M.,Rothbart H.,& Harris R.B. (1971)Cause of delay in the Construction Industry. Journal of construction Division, ASCE ; Vol 97, Issue(2)
- [4] Al- Barak AA. Causes of contractors failure in Saudi Arabia. Master Thesis, CEM Dept. KFUPM Dhahran, Saudi Arabia, 1993
- [5] Noulmanee A, Wachirathamroj J, Tantichattanan P, Sittivijan P.(1999) Internal causes of delays in highway construction projects in Thailand,
- [6] Mezher TM, Tawil W. Causes of delays in th construction industry in Lebanon.(1998) Engineering Construction and Architectural Management Journal.Vol; 5, Issue(3)
- [7] Herbsman ZI, Chen WT, Epstein WC. (1995) Time is money innovative contracting method in highway construction. Journal of Construction Engineering and Management, ASCE Vol 121, Issue(3)
- [8] Mansfield N R, Ugwu OO, Doran T (1994) Causes of Delay and cost overruns in Nigerian construction projects. International Journal of project Management Vol 12, Issue(4)
- [9] Alaghabari, W., Kadir, M.R.A., Salim, A. and Ernawati (2007) "The Significant Factors causing delay of building construction projects in Malaysia. Engineering", Construction and Architectural Management Journal, Vol14 , Issue(2), pp.192-206.
- [10] Doloi H., Sawhney A., Iyer K.C. and Rentala S.(2012) "Analysing factors affecting delays in Indian construction projects", International journal of /project Management, Vol. 30, Issue 4, pp. 479-489.
- [11] Ashwini Arun Salunkhe and Rahul S. Patil .(2014) 'Effect Of Construction Delays On Project Time Overrun :Indian Scenerio", International Journal of research in Engineering and Technology, Vol.03, Issue01, pp.544-545.