



A STUDY ON DELAYING OF WORKS IN CONSTRUCTION PROJECTS

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Abstract-This Paper is study about the major reason of delaying of work in construction projects. Delaying of the construction work is not able completion of wok in time its tends to increase the construction cost that means unable to completion of projects with in framed budget. By Analyzing this to make on time completion of projects By the gathering of information from the construction projects sites for finding the various solution in projects .In some times one problem leads to another problems.

1. INTRODUCTION

The construction industry is a key sector in the development and economic growth of most countries across the world. However, the industry faces a number of challenges, such as project delays. Projects or construction works that are not delivered on time to the client are referred to as delayed projects. The industry which is experiencing frequent and costly delays is the building and construction industry. However, according to recent survey, a numbers of construction projects which had the delay problems are very significant Construction project involves many unpredicted factors which results from many sources. These sources include the performance of project parties, resources availability, environment conditions and contractual relations. However it occurs in every construction project and the significant of these delays varies considerably from project to project. Therefore delay is an important problem in the construction industry. This study is to identify the factors contributing construction delay and their importance. This paper identifies the causes from the point of view of the main project professionals, The construction delay is a universal evident reality not only in India however all the countries faced

this global fact. Construction delay can be defined as execute later than intended planned, or particular period, or letter than specific time that all the concerned parties agreed for construction project. Delay in project is counted as a common problem in construction projects.

The project's success depends on meeting objectives within time and budget limits. Tools and techniques play important role in project management. The major factor of construction problems is project's delay. Delay problems occur frequently during project life-time which may lead to conflicts, contract termination, litigation etc... Hence it is important to study the ways causes of construction delay, as the services provided by infrastructure projects serve input sector and cost overran in these project lead to increase capital output ratio for the entir economy.

Delay means loss of income according to and for owners or client. In case of contractors, delay leads to the higher costs due to longer working time, labor cost increase and higher fabrication costs. On time completion of projects is an indicator of efficiency. But there are many uncertainty factors and variable resulting from various sources affecting construction projects,

2. LITERATURE REVIEW

Enas Fathi Taher and R.K. Pandey (2013) they have identified and ranked delay causes in the planning and design phases. A well structured questionnaire was sent to engineers at the Architect Engineering companies for public construction projects in India. This study has identified the delay causes and analyzed the importance and the frequency of delays using

the relative importance index. Analytical results shows that changes in client's requirement are the main cause of delays in both planning and design phases. The factors that were affecting have been categorized into contractor related delay, client related delays and material related delays and labor related delays. This literature has suggested good management and management of these causes can minimize the delays of the projects

Hitendra R. Gavhale (2013) they have evaluated specific schedule impact scenario on a single project Mumbai Metro Rail Project (MMRP) is taken as case study. The source of delay cost of delay and methods to mitigate delays were studied. The questionnaire survey covering delays and disputes was developed and presented to construction professionals Questionnaire covers various factors influencing delays attributed to client, contractor, consultant, material related, labor related, equipment and other external factors.

Remon Fayek Aziz (2013) this research works attempts to identify, investigate and rank factors perceived to affect delays in the construction projects with respect to their relative importance to proffer possible ways to coping with this phenomenon. Totally, ninety-nine (99) factors were short-listed to be part of the questionnaire survey and were identified and categorized into nine (9) major categories and they were consultant related factors, contractor related factors, design related factors, equipment related factors, external related factors, labor related factors, material related factors, owner related factors and project related factors. The data were analyzed using Relative Importance Index (RII), ranking and simple percentages.

Towhid Pourrostan and Amiruddin Ismail (2012) related the field of causes of delay in construction projects has been reviewed over the last decade through a questionnaire survey conducted in Iranian to solicit the causes of delay from consultants and contractors' viewpoint.

S.M.Renuga and Balasubramanian Malathi (2013) they have identified the critical factors influencing delay and their impact on project completion. In this study they have concentrated in Resource (Manpower, Material

and Equipment) related delay in construction projects. For this research, a questionnaire survey method was adopted to find the impact of critical factors that leads to resource related delays in construction projects.

Kasimu A. M (2013) the study focuses on specific causes of delay like insufficient coordination and inefficient communication between involved parties in construction projects. Questionnaire survey has been used as a tool to carry out this study. The results of factors are analyzed based on mean value criterion and standard deviation (SD). Some factors are improper planning of activities, lack of effective communication, design errors

3. TYPES OF DELAY

3.1 CONSTRUCTION DELAYS

There are a number of definitions for "delay": to make something happen later than expected, to cause something to be performed later than planned, or not to act in a timely manner. Each of these definitions can describe a delay in an activity of work in a schedule. On construction projects, as well. A construction project is commonly known as successful when it is completed on time, within budget, in accordance with the specifications and to stakeholders' satisfaction on other projects for which a schedule is being used to plan work, it is not means for delays to occur. The construction industry has a very poor reputation for coping with delays. Delay analysis is either ignored or performed subjectively by simply adding a contingency. As a result, many major projects fail to meet schedule deadlines. In a construction project in which money truly equals money, the management of time is critical

3.2 NON-COMPENSABLE DELAYS

Non-compensable delays are caused by third parties or incidents beyond the control of either the owner or the contractor and are not attributable to any of the parties. Examples typically include acts of God, unusual weather, strikes, fires, acts of government in its sovereign capacity, etc. In this case, the contractor is normally entitled to a time extension but no compensation for delay damages

3.3 COMPENSABLE DELAYS

Compensable delays are caused by the owner or the owner's agents. An example of this type of

delay would be the late release of drawings from the owner's architect. An excusable, compensable delay usually leads to a schedule extension and exposes the owner to financial damages claimed by the contractor. In this case, the contractor incurs additional indirect costs for extended field office and home office overhead and unabsorbed home office overhead.

3.4 NON-EXCUSABLE DELAYS

Inexcusable delays (non-excusable delays) are caused solely by the contractor or its suppliers. The contractor is generally not entitled to relief and must either make up the lost time through acceleration or compensate the owner. This compensation may come from either liquidated damages or actual damages, provided there is no liquidated damages clause in the contract.

3.5 PROJECT RELATED DELAYS

Project-related factors include project characteristics, necessary variations, communication among the various parties, speed of decision making involving all project teams and ground conditions.

3.6 CLIENT RELATED DELAYS

Client-related factors include those concerned with client characteristics, project financing, their variations and requirements and interim payments to contractors. It was interesting to discover that slow decision-making by the client is of importance to both parties. This observation is particularly true in certain cases in which the client has no priority/urgency to complete the project. Change orders were ranked fourth among the top five factors by both consultants and contractors. Change orders in construction projects can occur for both construction and administrative

3.7 CONTRACTOR RELATED DELAY

Contractor-related factors include contractor experience in planning and controlling the project, site management and supervisions, degree of subcontracting and their cash-flow. Both consultants and contractors ranked this group of causes very highly. From a total of nine identified factors of contractor-related delays, seven of these factors fall within the top 20 most important causes of non-excusable delays. Consultants and contractors are mainly concerned with technical and management

factors, such as inaccurate time estimates, inaccurate cost estimates, poor site management and supervision, improper project planning and scheduling, incompetent project teams, lack of competent subcontractors and inappropriate construction methods. It should be noted that the contractor is also liable for other groups of causes of non-excusable delays and not just this group named "contractor

3.8 MATERIAL RELATED DELAYS

Materials-related factors include shortages, materials changes, procurement programming and proportion of off-site prefabrication. There are two material-related delay factors among the top 20 most important factors that cause non-excusable delays. Shortage of construction material was ranked eighth and late delivery of materials ranked 14th. Shortage of construction materials on the construction site, poor site management and supervision, poor procurement programming of materials, contractor's financial difficulties, shortage of construction material from the material production or material distribution centre, escalation of material prices and inflation/price fluctuations are the material-related delay factors ranked by the respondents.

3.9 LABOUR RELATED DELAYS

Labour-related factors include labour shortages, low skill levels, weak motivation and low productivity. Although there are three factors of labour-related delays among the top 20 most important factors contributing to the causes of nonexcusable delays, as shown in Table 5, this group of causes received very low ranking by both consultants and contractors. This group seems to be more important to contractors than to consultants. Generally, labour problems are related to labour supply/slow mobilisation of labour, low productivity, lack of skill, low motivation, low morale, absenteeism and lack of commitment to the project.

3.10 EQUIPMENT RELATED DELAYS

Plant/Equipment-related factors include shortages, low efficiencies, breakdowns and incorrect selections. Inadequate modern equipment was ranked seventh and frequent equipment breakdown ranked 13th. Equipment allocation problems, frequent equipment breakdown and shortage of equipment parts are related to the factor of an insufficient amount of equipment. Inadequate modern equipment was

ranked seventh among the top 10 factors. This finding is particularly true for older model equipment, which is related to low production and frequent equipment breakdowns.

3.11 FINANCE-RELATED DELAYS

This group of causes was ranked low, sixth by contractors and third by consultants, difficulty in making monthly payments was ranked third among the top 20 factors by both consultants and contractors. This problem may be due to the existing culture in the construction industry. In most developing countries such as Nigeria, in most public work projects, including any construction project under the government's authority, there are always delays in payment for completed work due to bureaucracy in government departments. Regular monthly payments to contractors for work performed may remove constraints that could otherwise impede project progress, causing non-excusable delays. The other finance-related factor was the contractor's financial difficulties, which was ranked ninth by consultants and ranked twelfth by contractors. This factor was related to funding shortages, high interest rates and the contractor's cash flow during construction

3.12 CONSULTANT-RELATED DELAYS

Neither contractors nor consultants ranked this group of factors high among the major groups of factors causing delays. out of six factors of consultant-related delays (inadequate consultant experience, poor design and delays in design, inadequate project management assistance, slow response and poor inspection, incomplete drawing/detail design and inaccurate site investigation), only poor design or delay in design was ranked 16th, with a mean score of 3.60, out of the top 20 most important factors that contribute to the causes of non-excusable delays.

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