

Low-cost Construction with Delay Management in India

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ABSTRACT

Low-cost construction technologies aim to cut down construction price of using alternatives to plain ways and Input. "It is effective budgeting and technique that facilitate in bringing down the toll of building through use regionally gettable material in conjunction with improved skills and technology, whereas not sacrificing the intensity level, performance and lifetime of the construction." Low-price housing merely satisfies the first bed and basic human wishes for shelter and neglects completely different wishes that people aim home furthermore as psychological, societal, and aesthetic wishes and ultimately, would like for self-actualization. By victimization Low-price Housing Technologies, we are moving to cut approx. Twenty-fifth of the whole value of housing. The matter of delays in trade could also be a world development and there is no exception. The most purpose of this study is to identify the delay factors and additionally the result on the project completion by doing a case studies in ongoing comes. By analyzing the reasons for delay, potential recommendations are a unit given. The main factors celebrated throughout this case study area unit delays due to contractor, client and jointly due to nature's act like rain. the foremost vital causes were delays in contractor's payments, shortage of fabric in construction, modification in material, the atmospheric phenomenon, shortage of work force (skilled, semi-skilled and unskilled labour), frequent modification of staffs, poor computing machine management and improper management of the engineers. Several the delays area unit delay in submission of drawings, house constraints, and delay in payment by client, delay in material supply and native problems like strikes. The main effects of delay area unit price impact, reduced labour productivity, postponement in work, modification in labour allocation, etc. Not all delays could also be corrected; but few of them could also be overcome by up management responsibilities.

Keywords: Low-cost housing construction, delay management, delay analysis

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INTRODUCTION

Low-cost housing can be a term would not to explain Domicile units whose total housing value unit of measurement deemed "Affordable" to a bunch of people among a given gain vary. In recent years, there has been goodly dialogue over the definition of low-cost housing; low-price housing could also be drafted as a preparation of housing that caters to the necessities of heaps among their gain capabilities, whereas not sacrificing the intensity level, performance and lifelong of the construction. India is a developing

country having solely 2 hundredth population of upper financial gain cluster, UN agency area unit able to manufacture in developing nations. The infrastructure to support these cities, like buildings for housing and commercial enterprise, mass transit for moving of us and merchandise, and facilities for handling water and sewerage would force giant amounts of structure. The objective is to produce one in all the fundamental want, i.e., shelter to low financial gain wage earner. Low-cost housing may be a relative idea and has a lot of to try and do with budgeting and

seeks to scale back construction price through higher management, applicable use of native materials, skills and technology but whereas not sacrificing the public presentation and structure life. Delays and disruptions space among the challenges two-faced within the course of death penalty construction comes.

LITERATURE REVIEW

Sunil Kumar (2002) analyzed the production of fly ash–lime–gypsum (Fall-G) bricks and hollow blocks to figure out the problems of housing shortages and at the same time to build houses economically by using industrial wastes and investigated the compressive force, water concentration, density and strength of these bricks and hollow blocks. He noted that these bricks and hollow blocks have sufficient durability for their employment in low-cost housing development.

PK Adlakha and HC Puri (2003) studied prefabrication building methodologies for low-cost housing by highlighting the different prefabrication techniques, and the economical advantages achieved by its adoption.

Vivian WY Tam (2011) studied that the construction cost for the traditional and low-cost housing technologies. He associated the construction methods of walling, roofing and lintel. Military capability and durability of the structure, constancy, safety and mental satisfaction are factors that accept top priority during cost decrease.

AK Jain and MC Paliwal (2012) accessible an overview of the housing location in India and adoption of appropriate and cost-effective technologies in the state.

Sengupta Nilanjan and Roy Souvanic (2013) examined the acceptability and adaptability potential of different Eco-friendly Construction Technologies

through field study, literature survey and technical calculations and tried to find out the most appropriate one among those. From the survey and analysis concluded that Rat-trap bond wall and Filler Slab roof would be the most fitting and acceptable CECT amongst people fitting to the MIG (Middle Income Group) and below in India as they are satisfying all their guiding criteria.

Amit D Chougule et al. (2015) defined the works review surveys and various results with context to entrenched vigour, Design and durability, cost effectiveness, Design optimization for filler slab. Related to conventional in situ RC slab, this technique is economical and will result in saving of cement and steel and is an ideal step towards generation of affordable living accommodations, for developing countries.

PP Bhangale and Ajay K Mahajan (2015) analyzed the cost effectiveness of applying low-cost housing technologies in evaluation with the traditional construction methods. It was found that about 26.11% and 22.68% of the construction cost, counting fabric and labour cost, can be redeemed by utilizing the low-cost housing technologies in comparison with traditional construction methods for walling and roofing respectively.

Bredenoord J (2016) measures about the physical evolution of regions, such as city density and connectivity are equally as significant as measures concerning community development. The ending comprises support for community-built systems, small housing cooperatives (or similar sorts of cooperation) and separate households—or little groups—that shape and increase their houses incrementally.

Frank Fugar et al. (2010) examines the causes of delay of building construction projects in Ghana to define the most significant, according to the key project contributors; clients, consultants, and contractors.

Haseeb (2007) main objective of this work is the identification of mechanisms of postponement and their effects on the success and completion of the task. The most shared factor of postponement is natural disaster in Pakistan like flood and earthquake and some others like financial and payment problems, indecorous planning, poor site management, insufficient experience, shortage of materials and equipment, etc. Several factors cause the overall delay in the construction project such as some with in the contractor's liability and some are within the owner's liability. It is hard to differentiate due to overlapping nature of the events that which party or gatherings are accountable and what elements of the delay caused. It is generally seen that time lag problems are cause of dispute, negotiation, lawsuit, total desertion, litigation and abandonment.

Zaki Kraiem and James Dietmann (1987) Compensable Postponement is those which are within the control of, is the fault of, or is due to the sloppiness of the owner. These waits can happen under different situations. Excusable Delays are those which happen when the contractor is delayed by occurrences which are not attributable to either the Contractor or owner.

F Paceco Torgal, Said Jalai (2012) approved the study on earth edifice and building materials; it is experiential that in this paper earth construction has a major appearance in less developed countries. In order to revelation and highlight the status of earth construction, this object reviews some environmental welfare.

Ajibade Ayodeji Aibinu (2006) analyzed measurable data from finished building projects to assess the extent of delays, and information received from a postal survey study of building managers to evaluate the extent to which 44 recognized factors contributed to overall delays on a typical

project they have been involved with. The mediators were finally considered into client-related; contractor-related; quantity surveyor-related; architect-related.

CONCLUSION

In the existing study numerous technologies have been considered such as Prefabrication, Cost-effective Walling System (WS), Rat Trap Bond (RTB) and Filler Slab (FS) Technology. Mass housing bulls can be reached by relieving the formal methods of groundwork and performing building operation based on limited and individual needs and accepting common denominator based on views, populace needs and balanced consumption of materials and resources. Receipt of any other expertise for large scale needs a guaranteed market to operate and this cannot be established unless the product is efficient and economical. Fractional prefabrication is a method towards the above operation under controlled circumstances. List of ideas in this study for dropping construction cost is of general nature and it varies contingent upon the nature of the building to be constructed, efficient of owner, geographical location where the house is to be constructed, availability of the building material, good construction management practices etc. though it is essential that good planning and design methods shall be implemented by utilizing the facilities of an knowledgeable engineer or an architect for supervising the work, thus achieving overall cost efficiency to the range of 25% in genuine practice. *The main reasons of delay that affect construction project—* The most important causes identified were: delay in payment to the labour, poor supervision, suddenly lack of material, lake of time management, frequent change of staffs, poor site management, improper management of the engineers, delay in supply of material and lack of manpower. Also, the effects of these delays are: time overruns cost overrun, negative social

impact, idling resources and arguments. An investigation of the responsibilities of delay reasons suggests that a joint effort based on teamwork is compulsory to overcome delays. In summary, this project abridged some explanations behind the delays affected in these sites and suggests some possible recommendation to overcome those delays. Further study is required to examine the limitations and potential improvements to reasons of delays within each construction site.

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