



A STUDY FOR UTILIZING PROJECT MANAGEMENT METHODS IN CONSTRUCTION INDUSTRY

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ABSTRACT

Effective project management is the main key to open the lock of success in any project. Within the housing industry management plays a serious role to realize the effective results. It helps within the economical utilization of man, material and machines. Programming could be a kind of designing that describes that wherever, once and what work to be done. Price is that the main constraint in any project. Attained worth analysis provides the concept however the income happens within the project and it's terribly useful in knowing the standing of the project i.e. work is ahead or behind the targets. Compare to manual ways computer code are terribly useful and conjointly they're terribly correct which can overcome the issues related to the project. During this study, the employment of project management methods inside housing industry and their benefits are mentioned.

1.0. INTRODUCTION

It is said that construction industry has been considered as one of the important factors which represents the country's development or progress. As such, its success or failure unknowingly becomes national problems and issues. Construction is that the extent of that the facilities are designed and made with the out there materials from the suppliers and labor as stipulated by the government's regulative agencies within the space of safety, health and employment [1].

Residential construction could be a sector that plays an important role in country's development. Hence, correct and systematic management of this construction sector ought to be applied and enforced by the parties concerned, significantly the builders or the contractors. Construction covers each little and massive comes. The applying and implementation of contemporary project management ways ought to be adopted by single-family-dwelling home builders no matter the dimensions and level of the companies.

1.1. Construction Industry in India

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The construction trade is that the second largest trade in Republic of India once agriculture. It accounts for about 11.5% of India as GDP. It makes important contribution to the financial system and provides employment to sizable amount of individuals.

There are primarily 3 segments within the industry like assets construction which has residential and industrial construction, infrastructure building projects which has railways, roads, power etc and industrial construction that consists of textiles, oil and gas refineries, pipelines etc.

Construction is an important part of any country infrastructure and industrial development. Industries with its backward and forward linkages with varied different industries like cement industry, steel and bricks industry etc., catalyses employment generation within the country. Construction is that the second biggest economic activity next to agriculture. Broadly speaking construction will be classified into 3 segments Infrastructure, Industrial and assets.

Infrastructure segments involve construction comes in numerous sectors like roads, railways, ports, irrigation, power etc. Industrial construction is contributed by growth comes from varied producing sectors. Assets construction will be sub-divided into residential, commercial, malls/multiplexes etc.

The construction activity concerned in numerous sections differs from section to segment. Construction of homes and roads involves regarding seventy five % of civil construction severally. Building of airports and ports has construction activity within the vary of 40-50%. For industrial comes, construction part ranges between 15-20%. Among a selected sector additionally construction part varies from project to project.

Construction sector contributed regarding 11.5% to the country's GDP in FY 08. Over past few years, growth of the development has followed the trend of economic process rate of the country. The number between growth rates of construction and GDP has been regarding one.5X-1.6X. Over past three years, construction as a share of GDP has exaggerated from eight.0% in FY 06 to eight.5% in FY 08. Construction activity being labor intensive has generated employment for regarding thirty three million individuals within the country.

In Asian countries, public basic infrastructures project like bridges, roads, faculty buildings, hospitals, facility, piping and electrical provide lines rely heavily on correct project management in their implementation. The contractors, project managers, engineers, architects, amount surveyors, website supervisors, machine operators, and laborers are the prime movers to make sure no-hit completion of those comes. However, the problem of whether or not correct project management being applied in any respect levels or otherwise remains a matter attributable to some issues that has resulted in tremendous lost [2].

In the context of performance and profit of the development trade, they're principally caused by internal issues [1]. The continual existence of industry bring on to why there issues in performance and profit still exist up to this day and become pressing problems that require to be

resolved [1]. within the residential constructions, for example, the performance of the house contractors is taken into account to be lower wherever the amount of homes engineered each year is one or 2 units [3]. There's growing range of complaints from potential home homeowners of the poor performance and low productivity of the house builders [4], because the range of construction units of homes will increase.

Quality skill, cost, delayed completion, poor communication, excessive material and labor used, building failure, and industrial connected accidents are the major problems in construction industry. In and of itself these problems aren't solely raised within the previous construction of homes however additionally a revenant downside within the construction homes in Asian country that deems needs special attention.

2.0. Objective of the study

The aim of this study is to look at the quality in applying and implementing project management ways in building construction in Asian country. Therefore, to answer the analysis queries, the subsequent are the objectives;

- To find how to utilize project management ways within the construction of house.
- To look at the roles of state agencies to the house builders within the house construction comes.
- To ascertain the appliance and implementation of project management ways within the construction of building project.

3.0. Previous Works

The illustration within the literature review covers the whole industry. It's then narrowed all the way down to the categories and resources of construction from international and native studies within the past. Later the review is focused to the results and proposals in applying and implementing project management ways in tiny and massive scale comes.

3.1. Construction Industry

The literatures conferred here amplify the importance of application and implementation of a correct project management ways notwithstanding the magnitude of the project. Building construction includes construction of workplace and business buildings, terminus buildings and public buildings like colleges and hospitals. Significant engineering construction includes plant and plant buildings, bridges and tunnels, while industrial construction includes refinery, piping, cables and electricity.

Those who play vital roles within the industry will be divided into 3 levels of skilled sorts [5]. The primary level consists of amount surveyors, architects, engineers, land surveyors, and project consultants and government authorities. The second level is formed of project managers,

website supervisors, material suppliers and machines operators. And at last construction staff, plumbers, electricians, welders, plasterers, carpenters and steel staff represent the third level. James Matthew [1], on the opposite hand, outlined that the development trade is split into four categories; residential construction, building construction, significant engineering construction and industrial construction. Residential construction is more explained as single family homes, multi unit city homes, garden flats, high-rise flats and condominiums.

3.2. Project Management Sections

The project management components include designing, planning and dominant [6]. The review of literature findings are mentioned within the following sub-sections. Use of Project management software's is more efficient than the manual method. But the underlying procedures are the same and it is explained below.

- **Project Planning/Designing**

Project Planning is that the 1st part in project management. It's initiated within the early stage of the development. Design, organizing, guiding and dominant of project activities are a part of project designing. It's the premise of project management whereas contractors or home-builders are needed to befits the client's wants and needs [7,8]. Generally, tiny project is outlined by the length of your time it is completed, i.e. at intervals six (6) months [9]. Meanwhile, the development of every flat/house commonly takes between 6-12 months to finish. There are many indicators of unplanned comes activities [10]. 2 common indicators are project delay and financial loss [11,12].

- **Project Scheduling/Programming**

Project scheduling is another necessary component in project management. Comes with correct regular activities will manufacture higher quality work, price saving and quicker construction periods [6]. Indeed, project programming is significant to project execution success and in accomplishing the objectives and goals of a project [14]. The failure to use correct project programming may lead to high risk of project being delayed, interruption in project completion and project money lost [11,12].

- **Project controlling**

Another necessary component of project management is project controlling. Its role is to coordinate resources, people, money, equipment, machinery and time into a chosen timeframe to accomplish project objectives and acquire satisfying performance and results[7,15]. The sections of management in project management are objective management, style management, budgeting and price management, authority and approving management yet as finance management and to manage prices [15].

Project price is equally necessary as project management no matter the dimensions of the project [7]. The success of the project is set by the effective implementation of the management of the project price. Thus managing price with the scope of your time would offer sensible project outcome. Otherwise, the consequence of not applying project cost accounting throughout the development method would be mirrored by improper material management therefore inflicting excessive wastage of resources.

- **Resources of Construction**

The method of project management in residential constructions in Asian nation still remains backward primarily in terms of the strategies used. This was supported by [15] argument that in Asian nation, builders are normally slow to reply to the dynamical wants of the building trade. Home builders, notably in tiny constructions are too sluggish in their approach to new strategies and techniques. These factors lead to poor craft, low standards, longer project durations, completion delays, large price overruns, industrial connected incidents and building failures [15]. What that has been delineate [15] is that the reality of home builders not solely within the space of this study, however conjointly within the whole nation. The appliance of management strategies in residential construction acts as associate adjustment [5] to the building trade. If project management strategies were to be used, lots of enhancements will therefore be achieved.

4.0. RESEARCH AND METHODOLOGY

The research and methodology of project management includes several steps. This analysis is qualitative naturally. The illustration of the abstract model of the analysis style and method is shown in figure below.

The analysis is conducted in 2 stages. The primary stage is to know objectives and the review of literature. The aim is to accumulate a preliminary insight of the project management component construct and to search out the advantages of its application and implementation in a very tiny size project like the development of single flat/family house.

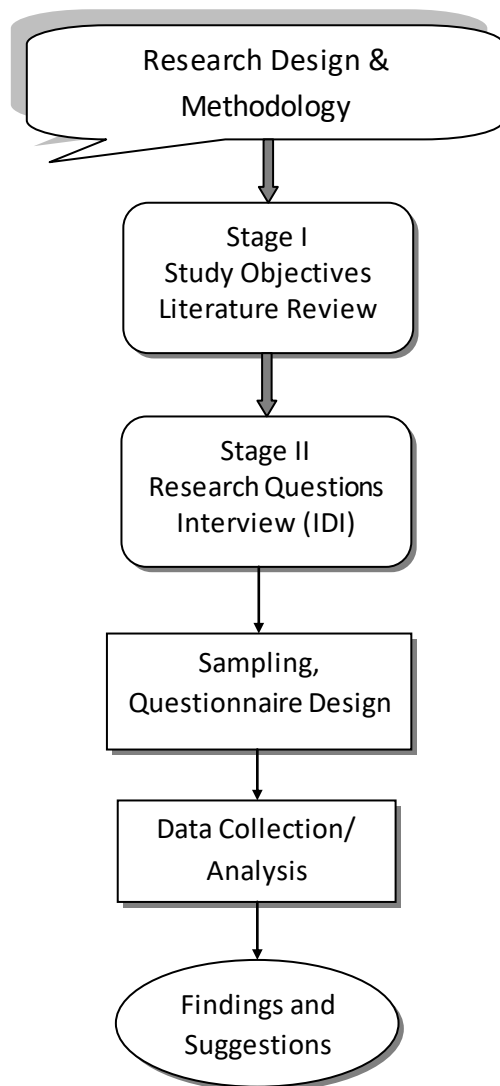
The Individual–Dept–Interview (IDI) is used to accumulate reliable answers from the respondents [11]. IDI is associate instructed-questionnaire administrated interview wherever the respondents are free from outside pressure once providing the answers to the queries asked. The advantage of this methodology verified sensible question will manufacture associate correct and truthful answer.

- **Sampling**

Sample frame is outlined as parties or subjects representing the total population of the topic. The parties commonly concerned within the project contain shoppers, consultants, authorities' contractors, web site supervisors and sales officers [15]. it's conjointly been steered [5]. that people directly concerned in single-detached-family house or cottage house construction is

among the house owners or money consultants, project management consultants, architects, city planners, amount surveyors, engineers, homebuilders, the most contractor, sub-contractors or suppliers.

In this study, the sampling frame is one in every of the stakeholders within the cottage house construction of that it is either homebuilders or contractors. The sample is that the individual (home builders or contractors) within the sampling frames.



- **Data Collection**

Data is collected by interviewing the respondents at pre-designated locations. This collected data can be analyzed later. The illustrations of interviewing method are explained below.

- **Interview procedure**

A face-face interview with semi structured open terminated queries as methodology of information assortment can be adopted. The benefits of this methodology are many. One in every of the benefits is that the investigator will raise the respondent a series of questions concerning the subject of the study. Method of interview needs listening and understanding skills at a similar time respecting what individuals say in a very systematic approach. A Questionnaire should be designed and distributed to the respondents.

The interview session can be conducted in a very preserved manner whereby many rules got to be abided. 1st of all, the interview should be performed at a timely hour whereby it doesn't interfere with the work activities of the homebuilders or intervenes with the respondents' quality time with their family. Second the place wherever the interview to require place should be agreeable by the respondents. Long motion time to induce to the situation of the interview session should be avoided. Therefore, the place chosen for interview should be simply accessed to by the respondents. Additionally, the words within the queries ought to be straightforward, clear and acceptable to respondent. Any words that have an effect on the sensitivity of faith, race, culture, and quality of the respondents ought to be avoided.

- **Data Analysis**

There are 2 stages of technique of Analysis. The primary stage was to organize information whereas the second stage was to research the info. Information preparation involves many processes and steps as well as piece of writing, coding, deciphering, and summarizing whereas information analysis concerned the gathering and assortment of info from the interview that had been fashioned into real data that may be analyzed and understood.

Descriptive statistics like tables, pie charts and figures can be chosen as a mean to show the analyzed information. Also, a segmental analysis can be used to look at, analyze and interpret the info. Information analysis and interpretation of interview responds to any or all of the three analysis queries earlier within the section.

So by following the above mentioned research and methodology procedure, project management can be implemented in the construction industry for efficient and timely completion of a construction project.

Now a day's advancement in technology in the construction industry give birth to many project management software's by using them projects can be managed very efficiently. Among the software MSP and Excel spreads sheets are widely using to control any project. By using them anyone can easily schedule the project and also Cash flow in the project can be effectively controlled. The best way to have good success in the project is by using the software efficiently which reduces the uncertainties which may involve in the project.

CONCLUSION

The aim of this study is to look at the applying construct of project management strategies and available software's in building construction project. The outcome of this study is of large price to the success of Asian country, also as a contribution to the literature. Perhaps, the suggestions from this analysis can be utilized by the govt. important person and regulators and therefore develop higher understanding of the appliance and implementation of contemporary project management of construction of buildings/homes in Asian countries.

Other than giving considerably positive ideas to the policy manufacturers in imposing rules and laws that require to be practiced by homebuilders, the findings of the study ought to facilitate to boost the standard of project management in house construction. These are the foundations and laws that ought to be practiced by homebuilders. By imposing new policies that require to be practiced by homebuilder's in house construction, issues and problems that arise within the residential construction as an entire may well be resolved. This study lends vital knowledge of correct project management in residential constructions project to homebuilders. The homebuilders can understand that applying and implementing fashionable ways and techniques of construction in buildings comes like project designing, project planning and project management acts as a steering to boost work performance and increase productivity. For alternative researchers, the findings of this study might offer for them a supply of reference.

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