

## Assessment of Project Management Practices of Public Housing Authorities in Addis Ababa, Ethiopia

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## ABSTRACT

The application of project management tools and techniques in public sector is gradually becoming an important issue in developing economies, especially in a country. There are different problems that are faced by housing projects such as delay, nonperformance of projects, not meeting required specifications and dissatisfaction of customers. This study aims to assess the extent to which project management is applied in Ethiopian public house (condominiums) projects and its contribution to success of these projects and to address the major causes of delay, cost escalation and poor quality. Project procurement management, project safety management, project time management, project quality management, project human resource management, project risk management, project stakeholders' management and project claim management have significant contribution to the success of Ethiopian housing projects.

Keywords: Project; Project management; Public; Public housing; Condominium; Project success; Critical success factors

## INTRODUCTION

The application of Project Management (PM) tools and techniques in public sector is gradually becoming an important issue in developing economies, especially in a country. Project management emerges in the organizational field as the application of knowledge, skills, tools and techniques to meet requirements to perform a project. During the evolution of this discipline, a large number of techniques were created for its enforcement. The characteristics of a project require a specific type of management. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling and closing [1].

According to Winter, et al., project management has become an emerging field with a broad academic and professional scope with the need for developing and updating in a regular basis. There are different problems that are faced by housing projects such as delay, nonperformance of projects, not meeting required specifications and dissatisfaction of customers, etc. This study aims to assess the extent to which project management is applied in Ethiopian public house (condominiums) projects and its contribution to success of these projects and to address the major causes of delay, cost escalation and poor quality [2].

With ever-increasing competition and uncertainties, more and more organizations are handling organizational issues on project management basis to achieve objectives at fast. Nowadays, project management has seen its application in various kinds of organizations and sectors that encompasses both services and manufacturing industries. In the past, project management was viewed as a threat to established lines of authority and thus to traditional way of managing organizational tasks, however today it is considered a competitive weapon to provide superior quality and services to the clients [3].

The goal of this assessment is to examine the practice of Public Housing Authorities (PHAs) in the area of PM. A model developed for this evaluation is used for identifying the strengths and weaknesses of PHAs in PM. A survey questionnaire was developed based on the Critical Success Factors (CSFs) for PM identified through a literature review. The questionnaire was used to collect information related to PM practices and process of PHAs. A PM assessment system was developed based on the CSFs identified to score the survey responses. The scores were

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Received: 08-May-2023, Manuscript No. GJCMP-23-23963; Editor assigned: 11-May-2023, PreQC No. GJCMP-23-23963 (PQ); Reviewed: 25-May-2023, QC No. GJCMP-23-23963; Revised: 01-September-2023, Manuscript No. GJCMP-23-23963 (R); Published: 29-September-2023, DOI: 10.35248/2319-7285.23.12.041.

Citation: Mengistu HS (2023) Assessment of Project Management Practices of Public Housing Authorities in Addis Ababa, Ethiopia. Global J Comm Manage Perspect. 12:041.

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then analyzed to identify the common weaknesses of PHAs in PM and improvement measures were suggested [4].

## MATERIALS AND METHODS

To general objective of the study was to assess project management practices of public housing authorities in Ethiopia. The specific objectives of the study include assessment of project management practice of public housing authorities in Ethiopia in terms of project process groups, defining the success rate of public housing projects in terms of project management body of knowledge areas and identifying the challenges encountered in managing public housing projects in Ethiopia.

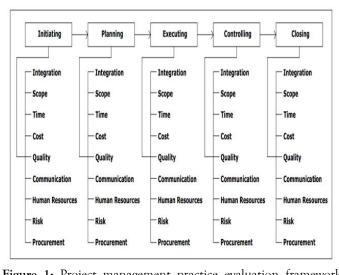
The study named building construction project management success as a critical issue in housing development and investment was conducted by Nwachukwu and Emoh. The study assessed Nigerian project management practice on the area of building construction, particularly in housing development and investment. The study tried to address project success factors that contribute to the achievement of project goals.

A study made in Dundy by Munns and Bjeirmi, focused on the role of project management in achieving project success. This paper has highlighted the overlap that exits between projects and project management and the confusion that can arise from the common use of these terms. It has also attempted to highlight how the objectives of a project and project management are different and how the emphasis of project management is towards achieving specific and short-term targets compared to the wider aims of a project. The conclusion is that to make the project management team totally responsible for success would appear to be inappropriate and that the client should take an increased interest in the development and use of the project [5].

According to Nwachukwu and Emoh, a project is termed successful if it passes four success test criteria *i.e.*, the time criterion completed on time; the cost or money criterioncompleted within budget; the effectiveness criterion-completed in accordance with the original set performance and quality standards; and client's satisfaction criterion-accepted by the intended users or clients whether the client is internal or from outside the organization. "The above success criteria call for successful project implementation by the utilization of proven management techniques of planning, organizing, directing and control. The issues on life cycle management, time management, conflict resolution and management, networking, contracts management, project choice and project quality are the key factors that contribute to project success".

## Conceptual framework

The conceptual framework serves as an assessment tool and the results of analysis can be used to make suggestions in improving an organization's PM application expertise and its use of technology. The nine PM knowledge areas and the five PM processes used in the PM framework are represented as follows (Figure 1).



**Figure 1:** Project management practice evaluation framework adopted from PMI (2013).

## Description of the study area

Addis Ababa is a capital city of Ethiopia and Africa as well. Not only is Addis Ababa the diplomatic capital of Africa, it is also one of the fastest growing cities in the world. Addis Ababa founded in 1886, it is the largest city in Ethiopia which covers the area of 527 km<sup>2</sup> and with a population of 3,384,569 according to the 2007 population census with annual growth rate of 3.8%. The Addis Ababa city council was established in 2008. The city council consists of 138 seats of which 64 are males and the remaining 66 are females' Addis Ababa comprises 10 sub cities and 116 woredas. The scarcity of shelter in the city is very high [6].

### Research design and approach

The study was designed to assess the practice of project management especially in construction area of Ethiopian ministry of urban development construction based on the Addis Ababa Condominium Integrated Housing Development Program (AAIHDP) using case study design as a site for accurate conclusions to be drawn from the study. The necessary data were collected and analyzed using both qualitative and quantitative research methods but largely qualitative research approach.

### Study population

AAIHDP project office is undertaking eighteen construction projects sites in the city currently. In the implementation of the program many stakeholders are involved such as; employer Addis Ababa housing development project office, 1,488 contracts at different grades, 32 consultants, small and micro enterprises as subcontractors and suppliers. This study tried to assess the practices of the quadruple constraints on the construction project management of the project office. Currently contractors categorized into nine grades depending on the level of respective capacity from grade 1 to grade 9 with ministry of construction and registered [7].

### Sampling technique

Amongst 18 branch offices project management system that are designed from the project office accordingly they have similar pattern nevertheless distinct performance capacity. Therefore, using convenience sampling method low-cost housing projects in Addis Ababa were selected for two reasons. First, the site located in this particular city were above 98% of completion stage that give complete depictions of execution practices and secondly AAIHDP was undertaking 10/90 and 20/80 condominium houses on D2 and G4 housing typology. In this regard it is appropriate and representative to take Addis Ababa as case study. Since projects in the city comprises both 10/90 and 80/100 program.

## Data collection period and methods

Data were collected January, 4 to 25/2023. In this assessment, data were collected by using interview with project consultants, document analysis, document survey and journal reviews. Educated opinions of this paper writers about the practice of condominium construction management against the quadruple constraints, in addition to document survey and journal review are used. And also, the necessary available corresponding documents were sampled in order to check the reliability of the responses. Mostly for this particular paper we have a secondary source of data which are published or unpublished documents from the journals, magazines, newsletters and publications form other sources are also used [8].

### Methods of data analysis and interpretation

Specifically, to analyze the qualitative data, thematic analysis (*i.e.*, summarizing and categorizing comments or opinions of the secondary data on the basis of their majority of similarities and to analyze them thematically) was applied to be analyzed and explain the results and discussion. Since the vastness of Addis Ababa and the number of projects found in city. We have selected a sample site to represent the findings. This particular site is Koye Feche site. In which primary source of data collection are also implemented. As secondary source a research paper done by Tessemma, titled "construction project management practice on quadruple constraints" was used [9].

## DISCUSSION

In this section, the data that are collected through primary tools are presented and analyzed. Before the data were presented, negative closed-ended questions of questionnaires were reciprocated to positive questions so that their responses were reversed. Return rate of responses, checking of validity and reliability, profile of respondents and presentation and analysis on issues related with the research questions are included in this section.

#### Knowledge areas

The practice of the ten general and four additional construction extension project management knowledge areas are assessed in this study. Accordingly, project integration management, project scope management, project time management, project HR management, project procurement management and project claim management are practiced well consistently (convergent/ similarly) across the housing industry projects. Project cost management and project risk management are poorly practiced consistently (convergent/similarly) across the housing industry projects. Project financial management is practiced well but divergently, which means there are different housing companies whose practice of project financial management may deviate from the expected level obtained from the analysis [10].

Project quality management, project communication management, project stakeholder management, project safety management and project environmental management are poorly practiced in Ethiopian housing industry projects. Since they have high standard deviation (divergent practice), poor practice of project quality management, project communication management, project stakeholder management, project safety management and project environmental management may not be seen in some housing companies. But the practice of human resource management, project risk management, project procurement management, safety, project environmental management is negatively criticized by significant construction consultants.

# The practice of project management in Ethiopian housing industry

So far, return/response rate of data collection tools, reliability and validity and profile of respondents were discussed. In this section of the data presentation and analysis chapter, the practice of project management is assessed. Both quantitative and qualitative methods of analysis are used. Below are sub sections of the analysis of practice of project management in Ethiopian housing construction industry.

# PM practices in terms of project management knowledge areas

As it is discussed in the literature review, project management knowledge areas are wings of project management in which they all include the project management process groups starting from project initiation up to project closing. In this section of the analysis, the practice of project management of Ethiopian housing construction industry is assessed from the view point of project management knowledge areas (Table 1) [11].

Table 1: Project management knowledge areas in Ethiopian housing industry.

Project management knowledge area	Project management knowledge area	Average result in percent, $\%$	Standard Deviation (SD)
Project integration management	4.1786	83.572	0.34224

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Project integration management	4.1786	83.572	0.34224
Project scope management	4.1875	83.75	0.26609
Project time management	3.9821	79.642	0.3354
Project cost management	3.8438	76.876	0.4397
Project quality management	3.9167	78.334	0.80006
Project human resource management	3.9792	79.584	0.62875
Project communication management	3.7861	75.722	0.45777
Project risk management	4.1215	82.43	0.49146
Project procurement management	3.9063	78.126	0.78648
Project stakeholder management	3.8889	77.778	0.57874
Project safety management	3.8056	76.112	0.56395
Project environmental management	4.1389	82.778	0.58908
Project financial management	4.1458	82.916	0.49955
Project claim management	4.1458	82.916	0.49955
Sum	55.6866	1113.912	7.16174
Overall project management	3.97776	79.5652	0.47704

# PM practice in terms of knowledge management process groups

From the literature review, it can be seen that project management can be analyzed either from the view point of knowledge areas or from the view point of process groups. The project management knowledge areas are categories under the overall project management practice whereas project management process groups are stages where a project passes throughout its life time. The project management practice of Ethiopian housing industry is assessed above in terms of the project management knowledge areas. In this the section below, the project management practice of Ethiopian housing industry is practices in Ethiopian housing industry average standard deviation project management knowledge area assessed in terms of the project management process groups (Table 2) [12].

 Table 2: Project management process groups in Ethiopian housing industry.

Project management process groups	Average result out of five	Average result in percent, $\%$	Standard Deviation (SD)
Project initiation process	4.4861	89.722	0.51056
Project planning process	3.976	79.52	0.3683
Project executing process	4.0125	80.25	1.03559
Project monitoring and controlling process	4.3171	86.342	0.96488
Project closing process	3.775	75.5	0.58477

Overall project management	4.2467	84.934	0.47704
Sum	20.5667	411.334	3.464

## CONCLUSION

The following are the conclusions related with contribution of project management knowledge areas to project success:

- Project initiation process group and project monitoring and controlling process group have no significant contribution to success of Ethiopian housing projects where they have low contribution.
- Project planning process group, project execution process group and project closing process group have significant contribution to success of Ethiopian housing projects. Among these process groups, project closing process group has moderate contribution whereas the other two have high contribution with success of Ethiopian housing projects.

Based on the findings from the analysis, the following is concluded on major causes of delay, cost escalation and poor quality:

- Among the many causes of delay problems, material and equipment price variation, resource shortage and existence of manpower are the most frequently occurred. Lack of foreign currency and uneven collection of dues from customers are also sometimes result delay of projects.
- Similar to the dominating cause of delay problem, material and equipment price variation highly results the existence of cost escalation. Supply market instability is the aggravating factor the price variation materials. The other aggravating factor for supply market instability is devaluation of birr against dollar.
- Three major causes of quality problems are available in Ethiopian real estate industry. The dominating cause is existence of poor-quality materials in the market. Poor workmanship and non-laboratory-based construction works are the other causes in the housing projects. To eliminate quality related problems, some housing companies install quality control system. Careful selection of quality construction materials is also the other mitigation factor used by companies.

## DISCLOSURE STATEMENT

The author report that there are no competing interests to declare.

## ETHICAL CONSIDERATIONS

Participants of the study were informed about the objectives of the study emphasizing that the data is used only for the intended academic purpose. The data was collected using document assessment and was done with full consent of the participants. A statement that clearly indicated their participation is only in voluntary basis and also interviews with AAIHDP officials, consultant and contractors were conducted up on their willingness and full collaboration. Careful attention was given in respecting the rights, needs and values of the participants and maintaining confidentiality of the data and acknowledging sources of information.

## FUNDING AGENCY

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

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