

Project Management for Engineering and Constructions Projects, Factors to Improve Project Management Performance

Zahra Merza Moosa Ahmed
College of Engineering
University of Technology Bahrain
Manama, Bahrain

Abstract:- The engineering and construction field have a great importance not only to the economic and social life, but also to the needs and inspiration of the local culture. The objective of this paper is to study the project management of engineering and construction projects and what factors that improve project management performance. The researcher used mainly quantitative method to complete this paper work. This paper met with a number of specialists in this field. The researcher developed a framework to organize the project management of engineering and construction projects, to be an effective tool to assist project managers in showing places of success and failure of the engineering projects. Furthermore, the researcher clarifies factors in construction projects to achieve the best results for engineering organizations and to meet the needs of the community projects through best quality and good value to the engineering and constructions projects.

Keywords:- Construction; Project Management; Economic.

I. INTRODUCTION

These conditions drove the researchers to concentrate how extend are overseen in the realm, and what are the significant components and issues influencing the development business, and furthermore encouraged the specialist to recommend a system that adapts to the turn of events and the developing concerns with respect to the development industry inside country territory contrasted with other non-industrial nations, to assist administrators with arranging and execute development ventures in an appropriate manner that will prompt better outcomes and less dangers, and to make progress with great quality.

The engineering and constructing projects today, and the objectives alongside different methods and assets will permit the countries to decide the future of the nation.

Despite this, business and private development work is expanding rapidly to meet the development of developing projects, it must be carefully focused and well organized to achieve the best results, and it must help to move forward with the right head to establish future goals.

All available conditions focused the authors on how expansion in the field is monitored and what are the important factors and issues affecting the development business, and further encouraged the expert to recommend a system that is tailored to development events and concerns. For the development industry in the country region compared to other non-industrial industrial nations, to help developers organize and function properly, promoting better results and less risk and progress with high standards quality.

1.1 Statement of the Problem

The current situations need to start an improved development the executives structure went with proper laws, control and evaluating framework with productive plans and fitting development material, to help project's managers to lead their organizations to progress, and to have any kind of effect in a profoundly serious climate.

To accomplish that, these inquiries ought to be replied:

1. How are management overseen in the countries?
2. What are the fundamental components causing disappointments in development management?
3. Is there any framework applied for management the executives?
4. Is there any system for overseeing management in huge scope endeavors?
5. How is management achievement estimated?

1.2 Objectives

To begin with a valuable level with an information based that will assess project directors lead their companies to be fruitful and have affect in a profoundly serious climate.

Objectives of this paper are:

1. To examine the improvement business and describe the nature and execution of the chiefs in the business, and its obligation to the overall economy and public movement.
2. To component the prerequisites and recognize the issues and the impediments that as of now exists being developed endeavors.
3. To use the eventual outcomes of this examination to assist with generating society and private regions in applying adventure the board to work on the idea of their work and sidestep issues.

4. To component the accomplishment factors in directing administration, endeavor to further develop it by using a system that masterminds work in planning associations.

1.3Hypothesis

1. H1: Is there a significant relationship with the main factors and the failures in engineering and construction projects?
2. H2: Is there a significant relationship with system applied for project management and projects improvement?
3. H3: Is there a significant relationship with methodology for managing projects and project improvement?
4. H4: How is project success measured?

II. RESEARCH METHODOLOGY

This section presents an overview of the methodological approaches that used in this study of project management to measure and analyze the data collection from the field.

Research Design

This paper is a descriptive research since the data has been collected is based on a questionnaire. The study was used quantitative method, which designed to test the relationships of the factors that improve the project management performance.

2.1 Population and Sampling

This study used a cross-sectional survey methodology. The sample has been selected from the members who involved in project management instructions communities.

The questionnaire design drew on previous studies identified through the review of literature. The questionnaire was reviewed and revised to correct the weaknesses identified prior to its widespread distribution.

Samples for the study was randomly collected from participants in project management instructions communities available.

2.2 Research Measurement Instrument

The overview instrument in this paper utilized the result of an iterative interaction of checking and refinement. The builds and things used to operationalize the exploration were created following the for the most part acknowledged rules of unwavering quality and legitimacy or different thing measures.

In the wake of combining the consequences of the writing audit, a poll was created dependent on the construction of the exploration structure.

The dependability and legitimacy were tried for the explanation of adjusting a prior instrument that will be valuable to quantify a critical variable in this examination. Cronbach's Alpha is utilized for checking the dependable of the part factors of all measurements for project the executives' factors. The result of reliability is the degree of the consistent result.

The analysis was accepted and having a true quality measurement and can proceed to the next step. The tables below show the summary of " Reliability Statistics - Cronbach's Alpha" results.

III. PRESENTATION, ANALYSES AND INTERPRETATION OF DATA

Table 1 Summary of Reliability Statistics

Reliability Statistics			
	Measured Variables	Cronbach's Alpha	N of Items
1	Initiation phase	0.979	21
2	Planning phase	0.987	22
3	Execution Phase	0.978	20
4	Closing phase	0.967	15
	Overall Reliability Statistics	.978	78

Table 2 Main elements effecting construction projects

No.	Main elements affecting the construction projects	Mean	STD	Rank
1.	Improper planning	8.55	1.41	1
2.	Cash-Flow problems during construction	7.77	2.80	2
3.	Mismanagement by the contractor (financial officer, sub-Contractor)	6.70	2.32	3
4.	Experience of project team	7.19	2.21	4
5.	Lack of effective communication	6.85	1.77	5
6.	Design errors	6.61	2.67	6
7.	Shortage of material	6.51	2.26	7
8.	Mistakes during construction	6.11	1.66	8
9.	Changes of design	5.54	2.84	9
10.	Israeli occupation and related obstacles	5.60	1.98	11
11.	Changes in site conditions	5.57	2.51	10
12.	Late deliveries of materials and equipment	5.31	1.89	12
13.	Increase in quantities in materials on site	5.13	2.31	13
14.	Site accidents	4.80	2.55	14
15.	Weather conditions	4.71	2.11	15

IV. RESULT

4.1 Hypotheses Testing

Table 3 Testing results of research hypotheses

Hypothesis	Result
H1: Is there a significant relationship with the main factors and the failures in construction projects?	Supported
H2: Is there a significant relationship with system applied for project management and projects improvement?	Supported
H3: Is there a significant relationship with methodology for managing projects and project improvement?	Partially supported
H4: How is project success measured?	Partially supported

RECOMMENDATIONS

These endeavors ought to work on the generalizability of this paper objective to the whole advancement marvel by considering a bigger number of reactions covering a scope of assorted tasks. Also, unique consideration ought to be designed for tracking down the human elements, which influence free factors like standing, self-adequacy, and advancement.

All methods acted in investigations including human members were as per the moral principles of the institutional as well as public examination council and its later revisions or similar moral norms. Informed assent was gotten from all individual members remembered for the examination.

REFERENCES

- [1]. Alanezi, M. A. (2018). Factors Influencing cloud Computing adoption in Saudi Arabia's Private and Public Organizations: A Qualitative Evaluation. *International Journal Of Advanced Computer Science and Applications*, 122-126.
- [2]. Caruntu, G. A., & Romanescu, M. L. (2018, October 16). The Assessment of Banking Performances-Indicators of Performance in Bank Area. Retrieved from Munich Personal RePEc Archive (MPRA): <http://mpra.ub.uni-muenchen.de/11600/>
- [3]. Hemetsberger and Reinhardt (2018, January), Cloud computing for banking Driving business model transformation.. Thought Leadership White Paper, pp. 8-13.
- [4]. Elzamly, A., Burairah, H., Abu Naser, S., Khanfar, K., Doheir, M., Selamat, A., & Rashed, A. (2016). A New Conceptual Framework Modelling for Cloud Computing Risk Management in Banking Organizations. *International Journal of Grid and Distributed Computing*, 7-12.
- [5]. Gartner. (2010). Ghane, F., Gilaninia, S., & Homayounfar, M. (2016). The Effect Of Cloud Computing On Effectiveness Of Customer Relation Management In Electronic Banking Industry: A CASE STUDY of EGHTEHAD NOVIN BANK. Kuwait Chapter of Arabian Journal of Business and Management Review, 4-9.
- [6]. Gutierrez, A., Boukrami, E., & Lumsden, R. (2015). <https://www.emeraldinsight.com/doi/abs/10.1108/JEIM-01-2015-0001>. Retrieved from Emeraldinsight: <https://www.emeraldinsight.com/doi/abs/10.1108/JEIM-01-2015-0001>
- [7]. JOB, M. A., & PANDEY, J. (2016). Technological Factors Influencing The Adoption Intentions Of Public Cloud Computing By The Private Sector Firms. *International Journal of Advances in Science Engineering and Technology*, ISSN: 2321-9009, 2-4.
- [8]. JOB, M. A., & PANDEY, J. (2016). Technological Factors Influencing The Adoption The Adoption Intentions Of Public Cloud Computing By The Private Sector Firms. *International Journal of Advances in Science Engineering and Technology*, 1.
- [9]. KIRIINYA, D. (2014). Factors Influencing Cloud Computing Adoption In Organisations: A Case Of Cooperative Insurance Company Of Kenya. United States International University.
- [10]. LUNDBERG, E., & ÅKESSON, C. (2015). Cloud Computing - Factors that affect an adoption of cloud computing in traditional Swedish banks. *Uppsala University. mmm*, 436-550.
- [11]. NEDELICU, B., STEFANET, M. E., TAMASESCU, I. F., TINTOIU, S. E., & VEZEANU, A. (2015). Cloud Computing and its Challenges and Benefits in the Bank System. *Database Systems Journal*, 44-56.
- [12]. OLIVEIRA, T., THOMAS, M., & MARIANA, E. (2014). Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors. *Information & Management* 51 (2014) 497-510, 3.
- [13]. Rieger, P., Gewald, H., & Schumacher, B. (2013, August 15-17). Influential Factors, Benefits and Risks from a Decision Maker's Perspective. *Cloud-Computing in Banking*, pp. 3-7.
- [14]. Sallehudin, H., Razak, R. C., & Ismail, M. (2015, June 1). Factors Influencing Cloud Computing Adoption in the Public Sector: An Empirical Analysis. *Journal of Entrepreneurship and Business* E-ISSN: 2289-8298, pp. 30-45.
- [15]. Scholtz, B., Govender, J., & Gomez, J. M. (2016). Technical and Environmental Factors Affecting Cloud Computing Adoption in the South African Public Sector. *Association for Information Systems AIS Electronic Library (AISeL)*, 5-12.
- [16]. Stieninger, M., Nedbal, D., Wetzlinger, W., Wagner, G., & Michael, E. A. (2018). Factors Influencing the organizational adoption of cloud computing: a survey among cloud workers. *International Journal of Information Systems and Project Management*, 11-23.
- [17]. Alanezi, M. A. (2018). Factors Influencing cloud Computing adoption in Saudi Arabia's Private and Public Organizations: A Qualitative Evaluation. *International Journal Of Advanced Computer Science and Applications*, 122-126.
- [18]. Hemetsberger and Reinhardt, Cloud computing for banking Driving business model transformation. (2018 7, January). Thought Leadership White Paper, pp. 8-13.