Factors Influencing Completion of Construction Projects the Case of Some Selected Buno Bedele Zone Hospitals

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Abstract

The construction industry is dynamic in the environment due to the growing uncertainties technology, budgets, and development processes. The main aim of this study was to assess factors influencing the completion of construction projects in some selected Buno Bedele zone hospital. To this end, the descriptive and explanatory design was conducted on 83 respondents taken based on census method, and data were gathered through questionnaire, The validity of the research instruments was confirmed by expert review, while the reliability of the tools was found 0.909 based on Cronbach's alpha. The data were analyzed using descriptive analysis, inferential statistics, regression analysis and correlations involving SPSS version 20. The major findings of the study show that funding, procurement bureaucracy, source of funding and misappropriations of project funds were factors influencing completion construction projects. The study also revealed that there is an influence of stakeholder participation on the completion of projects. The study found there was a statistically significant and positive relationship between the fund, project management, and leadership skills, stakeholder involvement and contract duration and completion of construction projects. The study concludes that adequate resource allocation, strong project leadership and stake holder involvement are essential elements in timely project delivery. Finally, The study recommends project managers should hold stakeholder engagement sessions in the lifetime of the project, contractors should employ the right professional for the right position related to work, Consultant of the project should have to collect sufficient data and detail site investigation and design should be done before tender to avoid future variations and cost estimator should have to consider appropriate risk and factors.

Keywords: fund, leader's skill, stakeholder involvement, and contract duration.

1. Introduction

Project can be viewed as a temporary endeavor to create a unique product, service or result. Construction projects usually include the design and build of a new structure (Majid,2006). The construction industry plays an important role in the growth and development of a country. Throughout the world, the business environment of construction organizations are operating continues to bring a rapid change. The success of any project is highly dependent on its completion time from start to delivery of results. This has a direct bearing on management decisions such as budgets, targets and standards (Serpell, 1998).

The major problem of the construction industry is facing, are the delays and the level of impact these delays on the projects to be delivered in a specified time, within allocated budget and expected quality. The main reason behind this is that construction projects are unique in nature, time-consuming, cost demanding and they are full of uncertainties. As a result, claims and disputes become common phenomena especially on large civil engineering contracts (Osazuwad, 2010).

Delays in the project, completion are a common problem in the construction industry not only with an incalculable cost to society but also with devastating effects on the contracting parties. The impact of delay is that funds committed on projects do not advantages planned recipients and subsequently results in cost and time overrun (Chism and Armstrong, 2010).Construction project completion is affected by many factors. Every investor wants to be sure of the project time and cost. This is because challenges that may affect project completion have far-reaching effects ultimately on the owners' interest. According to Chism and Armstrong (2010) in a study carried in USA declare that in the current economic landscape, project owners are scaling down or eliminating capital construction projects due to lack of financing, uncertainty over costs, and concerns about potential delays that could impact the feasibility basis of projects.

The building industry is important for both the developing and developed economies. It contributes 10% towards GDP for developed economies and more than 4% for the developing countries. The construction time has always been used as one of the benchmarks for assessing the performance of a project and the efficiency of an organization (Gwaya et al, 2014).

2. Statement of the problem

Chan et al, (2008) hold that the most important cause of postponement in the construction sector is financing by the contractor during the project, changes in designs by the owner or his agent during the construction, delays in contractor's payment and non-utilization of professional construction management. The end-users and stakeholders of a project play a fundamentally important role in success or failure of the project (Brennan, 2002).

Construction Management or Construction Project Management is the overall planning, coordination, and control of a project from beginning to completion. It's aimed at meeting a client's requirement in order to produce a functionally and financially viable project (Talukhaba, 2009).

The construction industry in Ethiopia has been developing tremendously since 2001. Studies by Zewdu and Aregaw (2015) indicated that the GDP contribution of the industry has been raised to 5.6% and approaches to the sub-Saharan average (6%). Meanwhile, the Gross Domestic Capital Formation (GDCF), which was about 60 percent in 1996/97, has reached nearly 75% in 2002/03. According to Zewdu and Aregaw (2015), Public construction projects in Ethiopia are parts of the country's development initiative, it shared a considerable amount of the country's scarce financial resources; the sector is the highest recipient of the government budget, Consequently, public construction projects consume an average annual rate of 58.2% of the government's capital budget.In Ethiopia, projects are the life line of construction plan or programs. Failure of projects irrespective of the sector, whether public or private contribute to permanent loss to society and to the economy as whole. Delays and non-completion of projects from initial cost plan has been common on construction sites. However, little or no efforts have been made to curtail the phenomenon. There have been numerous documented studies on failed or stalled construction projects. However, there has been no particular research to address factors influencing completion of construction projects in some selected Buno Bedele Zone hospitals. This research therefore seeks to fill in the gap that exists in the factors influencing completion of construction projects in some selected hospital of Buno Bedele zone.

3. Objectives of the study

3.1 General objective of the study

The main objective of the study was to assess factors influencing completion of construction projects in some selected hospital of Buno Bedele zone.

3.2 Specific objective of the study

- To examine the extent to which leadership support and funding influences the completion of the construction projects in some selected hospital of Buno Bedele zone
- To investigate the extent to which contract duration and stakeholder involvement influences the completion of the construction projects in the study area.

4. Research Methodology

The study was used descriptive and explanatory research design by combining both quantitative and qualitative research approaches to analyze data and obtain adequate information. The target population of the research paper was contractor, sub contractor, and project management core processes their total number is 83. Sampling techniques of the study was census method. The study used primary and secondary source data, primary data was collected by using questionnaires, the questionnaires were prepared thematically on the basis of the research questions and secondary sources of data were books, magazines and the internet that involves; looking into already done materials, document analyses from various published and unpublished documents.

Validity refers to the extent to which an instrument measures what is supposed to measure,

data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Mugenda and Mugenda, 2003). In the study, the validity of instruments was pre-tested by potential experts and consultant. The reliability of the instrument was measured using Cronbach's alpha test. The internal consistency reliability results in the study were 0.90 that is classified under excellent categories. Analysis of data was done in order to answer research questions of the study. Data collected was sorted, classified and coded then tabulated for ease of analysis. The data was summarized and categorized according to common themes To analyze the data, different kinds of statistical methods including descriptive statistics and inferential statistics was used. Furthermore, descriptive are applied for percentage standard devotion, and mean value was computed using SPSS (20).

5. Results and Discussions

Based on the sample size, questionnaires were prepared and distributed to the participants and from these, only 2 respondents did not return back the questionnaire. Due to this reason 81 (97.5%) of the distributed questioners are collected. According to Mugenda and Mugenda (2003) a response rate of 70% and over is excellent; therefore, this response rate is adequate for analysis and reporting.

The result of background of respondents indicated that majority of the respondents are male with total of 75.3% while the remaining 24.7% were female.With regarding to marital status of the respondent majority of respondent 65.4 % were married, with mention to age most of them are in the age range of 18-30 at 37% and education back ground majority of the employee sample group were first degree holders which represents 64.1% from the total employee participant, in addition majority of respondents have a working experience from 6-10 years which represent 34.5% from employee contributor of research.

Table 1: Inductor of Fund and Leadership skills on completion of construction projects

No	**Fund factors**	No	Mean	Stand. Devotion
1	Sourcing of project funds influence completion of construction projects.	81	3.8	1.127
2	Budgeting for construction project elements affects completion of construction project.	81	3.81	1.158
3	Adequate funding allocation enhances completion of construction.	81	3.82	1.255
4	Sponsors play a key role on funding for completion of construction.	81	3.73	1.036
Project Management and Leadership Skills factors				
1	Poor knowledge of project management affects project completion.	81	4.24	0.933
2	Supervision during construction is critical to ensure quality products and timely delivery of project.	81	3.60	1.005
3	Effectiveness of construction management will affect the speed of construction.	81	4.01	1.035

According to the findings in table 1,The sourcing of project funds, budgeting for construction project elements, funding schedule, and inadequate funding allocation enhances completion of construction and sponsors were affect the completion of a construction

project at the grand mean score of 3.8,3.81,3.82 and 3.73 respectively. This implies that the financial or fund factors influence completion of construction projects to a great extent.

The other factor is projected management and leader's ability, those are good leadership of the project team, poor knowledge of project management, supervision during construction and effectiveness of construction management were affect the completion of the construction project at grand mean score of 3.83, 4.24, 3.6 and 4.01 respectively. It implies that Good management and leaders skill of the project enhance proper and quick project completion.

Table 2: Indicators on takeholder Involvement and Contract Duration

No	**Stakeholder Involvement factor**	No	Mean	Stand. Devotion
1	Involvement of the stakeholders improves completion of the construction projects.	81	4.07	1.007
2	There is a relationship between involvement of the stakeholders and completion of the construction projects.	81	4.18	1.039
3	Some stakeholders interfere with the hospital project due to vested interest affect project completion.	81	3.9	1.112
4	Poor coordination of the stakeholders can cause delay in project completion.	81	4.06	0.998
Contract Duration Factors				
1	Project Scope affect project completion	81	4.03	1.160
2	Poor contract management, changes in site condition and shortage of material affect project completion.	81	3.84	1.272
3	Contractor's shortage in infrastructure, main supply of resources and clients and consultants affect project completion.	81	4.26	.959
4	The problem of vague work schedule influence project completion.	81	3.67	1.026

As per table 2, The stakeholder involvement factor is; involvement of the stakeholders improves completion of the construction projects, there is a relationship between involvement of the stakeholders and completion of the construction projects, some stakeholders interfere with the hospital project due to vested interest and poor coordination of the stakeholders affect project completion at a grand mean score of 4.07, 4.18, 3.9 and 4.06 respectively. It implies stakeholders have an influence on a project completion they normally benefit from a successful result of a project.

The last factor are contract duration; project scope, poor contract management, changes in site condition, shortage of material contractor's ,shortage in infrastructure, main supply of resources and clients and consultants affect project completion, and problem of vague work schedule influence construction project completion at the grand mean score of 4.03,3.84,4.26 and3.67 respectively. This shows that contract duration factors affect completion construction project in the study area.

Coefficient of Determination

The variation in completion of construction projects needs to be explained by fund, project management and leader's ability, stake holder involvement and contract duration.

Table 3: Coefficient of determination result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858[a]	.736	.733	.08389

According to table 3, the independent variables that were studied explain only 73.6% of the completion of projects as presented by the R^2. This, therefore, means that the independent variables only contribute to about 73.6% to the completion of projects while the other factors not studied in this research contribute 26.4 % to the completion of projects hence there is a need to further study the other factors.

Multiple Regression Analysis

Multiple regression analysis was done to determine various factors that influence completion of construction projects.

Table 4:Multiple Regression Analysis

Model	Unstandardized Coefficients	Standardized Coefficients		T		Sig.					
		B	Std. Error	Beta				1V:2H		1V:1H	
				1	.734	.285		2.581	.011	FOS	% Incr. FOS
1		2.19	1.55	4.17	90	3.58	131	5.68	166	4.7	203
	Fund factor	.402	.056	.330	4.663		14	2.32	9.7	1.97	23.6
	Project Management and Leadership ability	.389	.086	.312	3.855	.000	4.4	2.28	1.96	1.72	12.7
	Stake holder involvement	.331	.059	.284	2.782	.006	0.6	1.99	0.7	1.59	1.23
	Contract duration	.309	.074	.209	1.206	.000					
	Dependent Variable: project completion										

According to table 4,taking all factors (fund, Project management, and leadership ability stakeholder involvement and contract duration) constant at zero the completion of construction projects realized would be 0.734. The data findings analyzed also shows that taking all other independent variable at zero. A unit increase fund at beta value .402, which implies that a 1% increase in fund unit will cause a 40.2% increase in project completion. Project management and leadership ability at the beta value of .389 which implies that a 1% increase in project management and leadership ability unit will cause a 38.9% increase in project completion; stake holder involvement unit will cause a 33.1% increase in project completion. Contract duration at a beta value of .309 which implies that a 1% increase in contract duration unit will cause a 30.9% increase in project completion; the statically significance level of this variable is 0.000; this is at 95 percent confidence interval.

Conclusion

In conclusion, adequate fund allocation improves timely project completion however in the study area fund allocation has not been given the necessary attention it necessitates from the only government which does not have consistency. In addition to this project management and leadership ability is the other factors affecting the completion of the construction project. The study also revealed that there is an influence of stakeholder participation on completion of construction projects. This can be taken to mean the extent to which stakeholder participates ensures enhances ownership and sustainability of project. Finally, contact duration is the other factor affecting the completion of construction project in the study area. Based on the correlation analysis the relationship between the fund, project management and leader's skill, stakeholder involvement and contract

duration and completion of construction were strong and positive relationship and the results of regression analysis observed that fund, project management and leaders skill, stakeholder involvement, and contract and completion of construction has a significant positive effect on the completion of construction.

Recommendations

Based on the findings of this study and conclusion made, the study recommends that Project managers should hold stakeholder engagement sessions in the lifetime of the project to ensure that every interested party plays their role in ensuring the construction contract. The project manager as well as a top level management should apply proper project management techniques, such as: proper planning, scheduling and monitoring, proper cash flow and resource scheduling together with strict monitoring. The contractors should employ the right professional for the right position related to work, i.e. on project manager position the contractor should assign a person who has experience and specializes on construction technology and management, construction engineering and management, and related professionals. Consultant/supervisor of the project should have to collect sufficient data and survey, and detail site investigation and design should be done before tender to avoid future variations and during cost estimation process the estimator should have to consider appropriate risk factor and escalation factor, because during the construction period the cost of construction materials, tools, labors, equipment etc. may vary from time to time.

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