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DETERMINANTS OF PROJECT TEAM PERFOMANCE IN BUILDING CONSTRUCTION PROJECTS IN NAIROBI COUNTY, KENYA

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ABSTRACT

The general objective of this study was to establish the determinants of project team performance in building construction projects in Nairobi County, Kenya. The scope of this study was limited to 1500 building construction projects Nairobi County, Kenya. The design of this research was a descriptive research design. The sample population for this study was 100 building construction projects in Nairobi County. The collected data was analysed using both quantitative and qualitative data analysis methods. Quantitative method involved descriptive analysis. Data from questionnaire was coded and logged in the computer using Statistical Package for Social Science. The study further adopted a regression analysis to determine the relationship among the variables at 5% level of significance. It was notable that there exists strong positive relationship between the independent variables and dependent variable. The study showed that the independent variables in the study were able to explain 62.10% variation in the project team performance in building construction projects in the study area while the remaining 37.90% is explained by the variables or other aspects outside the model. This indicated that the set of independent variables are important factors that need to be enhanced to boost project team performance in building construction projects in the study area. The study recommended that there was need to allow the project team to have sense of belonging in the management of the affairs in the projects. There is need to enhance proper communication during the implementation of the projects. The study recommended for the project management skills to the project team to enhance performance of artisanal and small scale mining projects in Kenya.. There should be a good M & E system in place to ensure it raises timely feedback of the progress of the projects in the county.

Keywords: *Project Leadership, Project Communication, Project Management Skills, Monitoring & Evaluation, Project Team Performance*

INTRODUCTION

The building construction industry plays a fundamental role in the development of a nation and helps in meeting one of the society's basic needs of shelter. The industry contributes up to 10% to a country's gross national product. Most third world countries face acute endemic construction problems that over the years have raised both national and international concerns (Alum & Lim, 2014). However, a growing number of unfinished government construction projects in such countries seem to overshadow the efforts and thus pose many questions as to what is behind the failure in providing such a highly needed commodity. One may wonder whether such a failure has anything to do with architecture, attitudes and practices of the people or is it just a thing to be pegged on socio-economic platform of the society (Barasa, 2014).

The completion of projects in a timely manner is often a critical factor and measure of project success. In recent years, there has been an increasing interest in the use of projects as building blocks in the strategic management of organizations (Gundacha, 2012). 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 (Barasa, 2014).There is available evidence from literature on how to use projects for the management of organizational process to prepare the organization for its competitive future and survival. Today, project management techniques are used as the principal means by which operational and strategic issues are managed in both for-profit and not-for-profit organizations.

Due to the demand for built products from foreign investors and the growing economy, Vietnam's construction industry, experience strong growth. While some of the construction projects were successfully executed, others faced difficulties (Faridi, 2009). Despite the availability of various control techniques and project control software many construction projects still do not achieve their cost and time objectives (Alkinskia & Ige, 2014).A number of studies have been conducted to examine factors impacting on project completion in developing countries (Machungu, 2014) reported that shortage of skills of manpower, poor supervision and poor site management, unsuitable leadership; shortage and breakdown of equipment among others contribute to construction delays in the United Arab Emirates. Aiyetan, Smallwood and Shakantu(2011) examined causes of client dissatisfaction in the South African building industry and found that conflict, poor workmanship and incompetence of contractors to be among the factors which would negatively impact on project performance. It was also established that quality and attitude to service is one of the key factors constraining successful project delivery in South Africa.

In Kenya, delays in completion of building projects are rampant especially due to endemic corruption and poor reporting structures among the public sector (DFID, 2013). The construction industry contributes up to 5% of the National GDP as reported in the Economic Survey and contributes 10% to employment nationally (Republic of Kenya, 2010a). Further, the Constitution of Kenya in the Bills of rights gives every citizen the right to enjoy efficient and quality public services (Republic of Kenya, 2010b). The provision of infrastructure consumes about 10% of the National Budget as indicated in the Printed Estimates (Republic of Kenya, 2011). In the last three decades, construction research in Kenya has focused on the entities that constitute the construction industry – particularly the projects, the contractors and human resources- deducing the performance of the industry as a whole from the observations made on its parts.

Statement of the Problem

The contribution of building construction projects to the GDP has stagnated at about 3.8%, its contribution to economic growth due to completion of the established projects (RoK, 2013). In the year 2010, the growth in the government construction projects was 4.5 % while in the previous year 2009; the sector grew by 12.4%. This shows that there was great fall in growth in the government construction projects during the year 2010. The total value of reported private buildings works completed in the selected main towns went down significantly from Kshs. 37.3billion in 2009 to Ksh.21.3 billion in 2010. In the year 2011, the building and construction sector dwindled by 4.3%. It is estimated that about 48% of the building projects in Kenya show poor project team performance in terms of completion time, cost overruns and client satisfaction (Muchungu, 2012).

Sambasivan and Soon, (2010) states that project team performance in building construction projects is a global phenomenon affecting the overall economy of countries as well. Faridi and El-Sayegh, (2009) says, delay involves multiple complex issues all of which are invariably of critical importance to the parties to the construction contract. These issues concern entitlement to recover costs of delay or the necessity to prolong the project with the consequential entitlement to recovery costs for adjustments to the contract schedules. Today, many stakeholders in construction are becoming increasingly concerned about the duration of construction projects because of increasing interest rates, inflation, commercial pressures and of course, it's potential to result in disputes and claims leading to arbitration or litigation.

Similarly, Xia, & Chan (2012) identified lack of project management skills as the most important cause of time overruns in Hong Kong construction projects. Hwang, Zhao, & Ng (2013)found that the project team considered stakeholder management by contractor during construction as the top cause of delay in Egyptian building projects. Love, Sing, Wang, Edwards, & Odeyinka, (2013)found that contractors' financial difficulties were the most important cause of construction delay in Nigeria. Muchungu (2012) found out that Kenya is replete with incomplete, delayed or abandoned government sponsored construction projects which have been commonly referred to as white elephants. Whereas others components (equipment and material) are determined by the market price and are consequently beyond the influence of project management, Labour cost in building construction industry is estimated to be about 33%- 50% of the entire project cost (Hanna *et al*., 2014).

Since labour is more variable and unpredictable than other project-cost components, it becomes necessary to understand the effects of different factors on labour performance and productivity (Hanna *et al*, 2015). Previous researches confirm that project team performance loss results from various factors, which include but not limited to various variation in drawings, long hours of extra work, poor field management, and extreme climatic conditions (Alarcon & Borcherding, 2013; Leonard, 2010; Sanders & Thomas, 2013; Thomas & Oloufa, 2011). These factors typically produce extra disturbances that affect productivity and are beyond the direct control of a contractor, resulting in productivity loss or extra work hours necessary to accomplish the task. It is on this premise the study sought to establish the determinants of project team performance in building construction projects in Nairobi County, Kenya.

Objectives of the Study

The purpose of the study was to establish the determinants of project team performance in building construction projects in Nairobi County, Kenya. The specific objectives were:-

- To establish how project leadership influence project team performance in building construction projects in Nairobi County, Kenya

- To establish how project communication influence project team performance in building construction projects in Nairobi County, Kenya
- To establish how project management skills influence project team performance in building construction projects in Nairobi County, Kenya
- To find out how monitoring & evaluation influence project team performance in building construction projects in Nairobi County, Kenya

LITERATURE REVIEW

Theoretical Review

Contingency Theory

Unlike agency and stewardship theories, the contingency theory is more concerned with organizational structure which entails both the formal and the informal organization of hierarchical and information as well as decision making structures within an organization. The contingency approach to management has its roots in general systems theory and the open systems perspective. This open systems perspective views the complex organization as a set of interdependent parts that, together, constitute a whole which, in turn, is interdependent with the larger environment. The interactive nature of the elements within the organization and between the organization and the environment result in at least two open system characteristics that are central to the contingency approach. The principle of adaptation asserts that the elements within the system adapt to one another to preserve the basic character of the system. In addition, the principle of equifinality holds that a system can reach the same final state from differing initial conditions and by a variety of paths, (Hahn, 2007).

The Contingency theory by Fred Fielder comes from the standpoint that effectiveness in an organization requires that all HR policies are consistent with other aspects of the organization. The theorists have attempted to demonstrate how HR practices are in line with different strategies in the organization and their relation to the performance of the organization (Wright, 2001). An organization for it to be effective should adopt HR practices that are in line with their strategy.

The argument of the theorists is that leadership strategy is more efficient when it is linked to its surrounding context and the business environment. Contingency theory is linked with the concept of fit- the need to achieve congruence in strategies employed in HR including its practices and laid down policies and the business strategies within the context of its external and internal environment (Lanagat, 2015). There is the element of external fit which is linked to the operations strategy and marketing strategy that bring about competitive strategy .Internal fit is concerned with HR policies and practices which should be coherent. Avoidance of colliding policies is important (Gundecha, 2012).

The organization leadership should thus be seen to be in line with organization strategy and not be flawed. This ensures that it goes hand in hand with the desired results. Leadership policy should be in line with the strategies of the organization, the level of importance it levels on effective leadership (Durai, 2010). The budget set aside for management determines the choice of forms of leadership is of great importance to the success of any strategy implementation

Competency Theory

The work of McClelland &McBer in the 1980s established the competence theory. The authors defined competency as the underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation. Since then a number of competency frameworks have been developed by different project management institutes. Crawford

(as cited in Boyatzis, 1982 & Spencer, 1993), puts a model of competence that integrates knowledge, skills, demonstrable performance, and core personality characteristics, noting the last, personality characteristics, as challenging to develop and assess through training. She argues that two of the most influential project management standards, the PMBOK, address only the knowledge aspect of competence while a third, Australia's National Competency Standards, draws from knowledge but focuses only on demonstrable performance. Crawford, (2010) study found out that project managers "do not necessarily have the required competence or perform the full activities required to promote and implement the changes that they are leading as part of their projects. Interest in project management competence stems from the very reasonable and widely held assumption that if people who manage and work on projects are competent, they will perform effectively and that this will lead to successful projects and successful organizations (Aljoairi, 2011). Competence is generally accepted, however, as encompassing knowledge, skills, attitudes and behaviors that are causally related to superior job performance. Crawford (as cited in Boyatzis, 1982 & Spencer, 1993), stated that professional competence in project management is attained by combination of knowledge acquired from training and its subsequent application and other skills developed in the course of work. Previous management studies have investigated the impact of competency on performance. Burke (2013) have argued for a competency based performance model for construction project managers where managerial behavior input is appraised and nine performance indicators for PM competency are developed to comprise team building, leadership, decision-making, mutuality and approachability, honesty and integrity, communication, learning, understanding and application, self-efficacy, and maintenance of external relations. In the context of construction project management; it is assumed that if the project manager and the project team have all the required competence (project management skills) there will be improvement on the project team performance in building construction projects.

Social Exchange Theory

This theory guided the study in establishing the relationship between project communication and project team performance in building construction projects. One way of analyzing social interaction among project team members is through the social exchange theory. This theory also called the communication theory of social exchange is a commonly used theoretical base for investigating individual's knowledge-sharing behavior. According to Burke (2013) and Molms (2011), this theory explains how individuals regulate their interactions with other individuals based on a self-interest analysis of the costs and benefits of such an interaction. That is, it suggests that human beings make social decisions based on perceived costs and benefits, such that they seek to maximize their benefits and minimize their costs when exchanging resources with others These benefits need not be tangible since individuals may engage in an interaction with the expectation of reciprocity. In such exchanges, people help others with the general expectation of some future returns, such as gaining desired resources through social reciprocity. In order to maximize the resources gained, individuals may build social relationships with others by sharing their knowledge. The fundamental dimension in the social exchange theory is individual cognition, which may include perceived benefits and organizational commitment. For sytheet al(2006) defined the term perceived benefits" as the individual's subjective perception of gain from their behaviors. The theory thus declares that individuals engage in social interaction based on the expectation that it will in some way lead to social rewards such as approval, status, and respect (Forsytheet al, 2006).

Conceptual framework

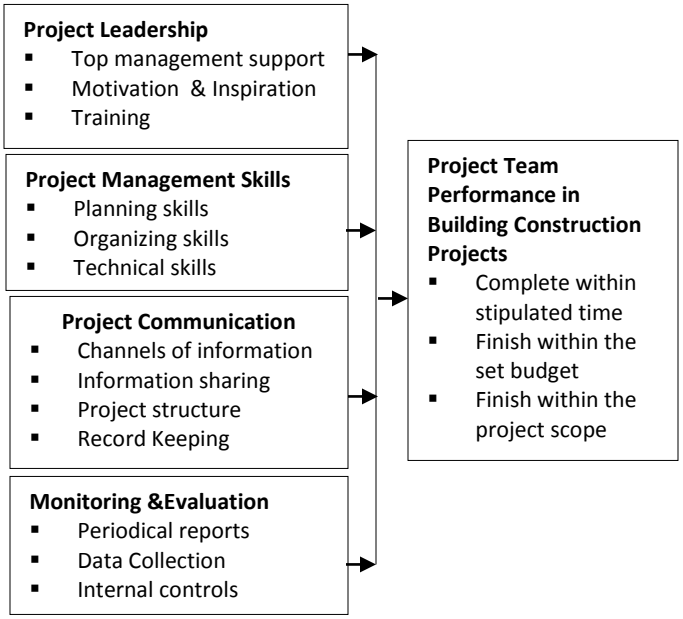

Figure 1: Conceptual framework

Project Leadership

Project leadership is life blood of any project and its importance cannot be underestimated. According to Al-Karshi and Skitmore (2009) definition, project leadership as the interaction process which occurs between leader and other workers and the goal of which is reaching to determined aims of management. As the communities become more science oriented today, leadership is defined as the convincing ability of individuals who have leadership quality in order to make people in his environment reach the determined aim (Gundecha, 2012).There is variety of styles among leaders. This consists of autocratic, laissez faire, democratic, and bureaucratic (Abdi et al., 2012). Leadership is a process of influencing others' commitment towards realizing their full potential in achieving a value added, shared vision, with passion and integrity (Burke, 2013). Leadership style in an organization is one of the factors that play significant role in enhancing or retarding the interest and commitment of the individuals in the organization (Gundecha, 2012).

Project Management Skills

The required project management skills can include: communication and feedback systems, quality, safety, risk and a conflict management system, supervisory skills, experience, coordination and leadership, communication skills, organizational structures, control mechanisms of subcontractors' works, and the overall managerial actions in planning, organizing, leading and controlling (Al-Karshi & Skitmore, 2009)). Simushi (2017)convey that planning and management of a project, irrespective of its complexity require the opinions of a system based on the number of stakeholders involved. Mutual communication between these stakeholders enhances division of labour, development of individual competencies and responsibilities for effective decision making.

Project Communication

Communication is a key issue for successful project implementation and management. It is specifically a challenging task for projects where a number of interdependent role players are needed to achieve the desired project outcomes (Chigara & Mangore, 2012). Communication is very essential in project execution. It plays a vital role in all stages of construction such as design production, organization and management (Barasa, 2014). Statistics have shown that over 50% of projects in Africa are unsuccessful due to inappropriate communication method (Kasim & Usman, 2013). Various professionals in the construction industry must communicate effectively for any given project to be successful. During the course of project execution, information in the form of drawings, specifications and construction methods must be fully disseminated (Chigara & Mangore, 2012).

Monitoring and Evaluation

Monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals

and objectives while evaluation is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making (UNDP, 2009). Monitoring and evaluation is conducted for several purposes namely to learn what works and does not; to make informed decisions regarding programme operations and service delivery based on objective data; to ensure effective and efficient use of resources; to track progress of programmes; to assess extent the programme is having its desired impact; to create transparency and foster public trust; to understand support and meet donor needs; and to create institutional memory.

Project Team Performance

Performance of projects teams influences productivity of the teams. Productivity is generally defined as the average direct labor hours required to install a unit of material. It is said that perfect productivity can be achieved with a 40-hour work week. The term performance expresses the relationship between outputs and inputs (Ondari & Gekara, 2013). Output and input differ from one industry to another. Also, the productivity definition varies when applied to different areas of the same industry. Labor is one of the basic requirements in the construction industry. Labor performance usually relates manpower in terms of labor cost to the quantity of outputs produced (El-Golary. 2013).

Empirical Review

Project Leadership

Khan and Rasheed (2015) examined the role of leadership and team building in project management. The project manager is tasked to execute project leadership, team building and team motivation to facilitate the achievement of project success. Leadership in projects includes the actions that project leaders take to inspire and motivate the project team towards the desired project goals. Utilizing effective leadership styles plays a vital role in ensuring effective decision making and project success. Chiocchio & Hobbs (2015), team building forms a critical aspect in promoting project success. The project manager ensures that he or she selects a competent project team and ensures that the team is inspired and motivated towards achieving the set goals and objectives. Team building also involves defining different roles within teams especially roles that involve collaborative tasks.

Project Communication

Musyoka (2017) did a study on the role of communication and coordination in project success. In this context, a two-stage case study of construction phase delay control for an oil and gas industrial project is presented. A process improvement methodology was carried out in the first stage and the root causes for the delays were identified. The investigation results revealed that the scope of one item of work, piping, dominated a large portion of delays. It was found that piping packages were not processed smoothly due to four main causes: incomplete testing, frequent piping modifications, incomplete as-built drawings, and incomplete punch listing. Seventy percent of the delays were caused by incomplete testing activities and incomplete as-built drawings. The improvement study suggested establishing a new unit for piping test package control and coordination. The review process was improved and the dedicated control team was implemented for the second unit, resulting in a substantial drop in the number of delayed test packages (down from 48 to 8%) and punch list items (down from 3,075 to 2,371). The findings of the case study demonstrate the importance of communication and coordination in successful project management for complex projects. The case presented is an example of process improvement use for successful delay management

Project Management Skills

Nyaga(2014) sought to investigate the role of construction project management skills on performance of construction projects with reference to construction firms based within Mombasa. The survey targeted selected construction firms within the Mombasa County and especially the ones that deal with the major projects that have high impacts to the country economy currently being undertaken within the County. The study employed both quantitative and qualitative research in its data analysis. Data was presented using tables. The study found out that Projects are constrained by inadequate planning skills that are required for effective planning for project success; Project planning is complicated and risky, hence requires varying skills sets for successful project implementation and management; Increasing complexity in the projects with pressure of time and costs has led to the introduction of high quality software and hardware which requires skilled planning.

Monitoring and Evaluation

Amaka (2011) studied the critical success factors influencing construction project performance in Nigeria. The research survey demonstrated the operating environment has a vital role in determining the critical success factors influencing project performance of a project. The result revealed M & E as a critical success factors which can influence project performance in Nigeria. These factors were objective management, management of design, technical factors, top management support and risk management. Project managers often use project plans, milestones and budgets to reduce risks and obtain project control. The common thread from the surveys on why construct projects succeeds include among others; clear goals, management support, control mechanism and communicating . The proposed approach raises a major conflict issue with the role of the project manager as it is very hard for project managers to keep the pace of the project when kept under a constant auditing (Alshanbari, 2010). According to (Chavada, Dawood, & Kassem, 2012) the Gantt chart widely used in project does not capture the visual interaction between the construction activities during the implementation phase. Continuous monitoring and evaluation have show to produce the desired results.

METHODOLOGY

A research design describes how the study addresses the specific aims and objectives of the research (Mugenda & Mugenda, 2012). This study was descriptive survey designed to establish the determinants of project team performance in building construction projects in Nairobi County, Kenya. Data available from the National construction Authority (2017) records revealed that there were 1500 building construction project teams(developers, consultants, site supervisors and contractors) implementing building construction projects in different parts of Nairobi County.
Data collected was analysed using quantitative method with the help of (SPSS). Quantitative data was analyzed by employing descriptive statistics and inferential analysis Descriptive statistics such as measures of central tendency and dispersion along with percentages were used to organize and summarize numerical data. The Multiple Regression model that aided the analysis of the variable relationships was as follows:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon,}$$

Where; Y= Project team performance (dependent variable);

β0= constant (coefficient of intercept);

X_1= Project Leadership (independent variable);

X2= Project management skills (independent variable);

X_3= Project Communication (independent variable);

X_4= Monitoring and evaluation (independent variable);

ε = Error term;
$\beta 1 \ldots \beta_4$= regression coefficient of four variables.

FINDINGS

Project Leadership

The first objective of the study was to establish the influence of project leadership on project team performance in building construction projects in Nairobi County, Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to project leadership and its influence on project team performance in building construction projects. Responses were given on a five-point scale where: 1= Very small extent; 2= Small extent 3= Moderate extent; 4 = Great extent; 5= Very great extent. The scores of 'Very small extent' and 'Small extent' had been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Moderate extent' had been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'Great extent' and 'Very great extent' had been taken to represent a statement great extent upon equivalent to a mean score of 3.5 to 5.0.

Table 1 below presented the findings. The majority of respondents indicated to moderate extent with most statements posed as regards influence of project leadership on the project team performance in building construction projects. Majority particularly to moderate extent that they allowed to have sense of belonging in the management of the affairs in the projects (3.344); They carried out higher responsibilities with other leaders like project managers with little supervision (3.211); The project management had ensured that their orders had zero mistakes (3.654); The project management ensured that they were helped to achieve project goals (3.176); The project leaders were involved when important issues arose and retain decision making (3.532); The decision making process was slowed down and workable results required enormous amount of effort (3.260). The study findings indicated that the project leadership influence project team performance in building construction projects.

Table 1: Project Leadership

Statements	Mean	Std. Dev
We are allowed to have sense of belonging in the management of the affairs in the projects	3.344	1.356
We carry out higher responsibilities with our leaders with little supervision	3.211	2.780
The project management has ensured that the orders have zero mistakes	3.654	1.783
The project management ensure that we are helped to achieve project goals	3.532	1.903
Project leaders are involved when important issues arise and retain decision making	3.400	1.321
The decision making process is slowed down and workable results require enormous amount of effort	3.260	1.230

Project Communication

The study sought to assess the influence of project communication on project team performance in building construction project in Nairobi County, Kenya. This section presented the findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Very Great

Extent; 4 = Great Extent; 3 = Moderate Extent; 2 = Small Extent; 1= Very Small Extent). Table 2 presented the findings. The scores of 'Very Great Extent' and 'Great Extent' have been taken to represent a statement not agreed upon, equivalent to mean score of 3.5 to 5.0. The score of 'Moderate Extent' was taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'Small Extent' and 'Very Small Extent' have been taken to represent a statement highly agreed upon equivalent to a mean score of 1.0 to 2.5

According to study findings the respondents indicated to a great extent that the project team had experience in interpretation of working drawings (3.345); The poor and distorted information slowed down project implementation and lead to extra cost (3.349); The unclear channels of communication had slowed and culminated delay in project implementation (3.658); they did regular site meetings between the consultants and contractors (3.773); There was regular review and adjustment of communication report (3.543); there were regular annual reports (3.789); There was information on work breakdown structure necessary for division of labour (3.321). The study findings showed that project communication influence project team performance in building construction projects in the study area. The study findings corroborate with literature review by Chigara and Mangore (2012) confirmed that project communication is very important for the successful implementation of projects.

Table 2: Project Communication

Statement	Mean	Std
The project team has experience in interpretation of working drawings	3.345	.231
The poor and distorted information slow down project implementation and lead to extra cost	3.349	459
The unclear channels of communication has slowed and culminated delay in project implementation	3.773	.421
We do regular site meetings between the consultants and contractors	3.543	.569
There is regular review and adjustment of communication report	3.789	.274
There are regular annual reports	3.268	.052
There is information on work breakdown structure necessary for division of labour	3.321	.091
Average Mean	**3.128**	

Project Management Skills

The other objective of the study was to establish the influence of project management skills on project team performance in building construction projects in Nairobi City, County Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to project management skills and its influence on project team performance in building construction projects in Kenya. Responses were given on a five-point scale where: 1= Very small extent; 2= Small extent 3= Moderate extent; 4 = Great extent; 5= Very great extent. The scores of 'Very small extent' and 'Small extent' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Moderate extent' had been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'Great extent' and 'Very great extent' were taken to represent a statement great extent upon equivalent to a mean score of 3.5 to 5.0.

With a grand mean of 2.985, a majority of respondents can be said to a moderate extent that the project team possess adequate project management skills (3.123); The project stakeholders were satisfied with management skills of the project personnel (2.890); The project team possess planning, communication and technical skills (3.210); The project resources managed properly during the implementation of the projects (2.886); The project managers possessed budgeting and auditing skills to enhance completion of the projects (3.008); The project managers financial management skills has enhanced timeliness and quality of the projects (2.890). The study results imply that project management skills influence project team performance in building construction projects in the study area.

The study findings were in line with literature review by Faridi (2009 who observed that the required project management skills can include: communication and feedback systems, quality, safety, risk and a conflict management system, supervisory skills, experience, coordination and leadership, communication skills, organizational structures, control mechanisms of subcontractors' works, and the overall managerial actions in planning, organizing, leading and controlling. Barasa, (2014) convey that planning and management of a project, irrespective of its complexity require the opinions of a system based on the number of stakeholders involved. Mutual communication between these stakeholders enhances division of labour, development of individual competencies and responsibilities for effective decision making.

Table 3: Project Management Skills

Statements	Mean	Std. Dev
The project team possess adequate project financial management skills	3.123	.876
The project stakeholders are satisfied with management skills of the project personnel	2.890	.542
The project team possess planning, communication and technical skills	3.210	.431
The project has adequate communication and problem solving skills to manage projects properly during the implementation of the projects	2.886	.095
The project managers possess budgeting and auditing skills to enhance completion of the projects	3.008	.124
The project managers financial management skills has enhanced timeliness and quality of the projects	2.890	.653
Average mean	**2.985**	

Monitoring & Evaluation

The study sought to assess the influence of monitoring & evaluation on project team performance in building construction projects in the study area. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Very Great Extent; 4 = Great Extent; 3 = Moderate Extent; 2 = Small Extent; 1= Very Small Extent). The scores of 'Very Great Extent' and 'Great Extent' were taken to represent a statement equivalent to mean score of 3.5 to 5.0. The score of 'Moderate Extent' were taken to represent a statement to a moderate extent, equivalent to a mean score of 2.6 to 3.4. The score of 'Small Extent' and 'Very Small Extent' were taken to represent a statement equivalent to small extent with mean score of 1.0 to 2.5

The study established that majority of the respondents stated to a moderate extent that there was adequate M & E plan for continuous monitoring of project activities to enhance continuity (2.872). The staff working on monitoring and evaluation is dedicated to the function to enhance project continuity (3.218). The roles and responsibilities of monitoring and evaluation personnel had not been specified at the start of the project (4.218).There were monitoring resources devoted to developing needed data on clinical and cost-effectiveness of medical interventions for comparative, evidence-based evaluations from the projects in the county (3.241). There was a good M & E system in place to ensure it raises timely feedback of the progress of the projects in the county (3.218). The project had an effective plan to allocate enough fund and manage M & E activities in supporting and implementing various sustainable projects in the county (2.896) and the staff is entrusted with monitoring and evaluation have technical expertise in the area (3.642). The study findings showed that monitoring and evaluation influence project team performance in building construction projects in the study area. The study findings were in agreement with literature review by Alum and Lim (2013) who indicated that the systemic and regular collection of data from projects will assist the project team to learn from experience and improve practices, allow for both external and internal accountability of the resources invested and the results realized as well as ensure planned activities are adhered to (Barasa, 2014).

Table 4: Monitoring & Evaluation

Statement	Mean	Std.
Do you have adequate M & E plan for continuous monitoring of project activities after donors' exit?	2.872	.097
Is the staff working on monitoring and evaluation is dedicated to the function?	3.218	.876
Are the roles and responsibilities of monitoring and evaluation personnel have not been specified at the start of the project?	4.213	.543
Are there monitoring resources devoted to developing needed data on clinical and cost-effectiveness of medical interventions for comparative, evidence-based evaluations from the health projects in the county?	3.241	.009
Is there a good M & E system is in place to ensure it raises timely feedback of the progress of the services delivery from health projects in the county	3.218	.800
Does the project have an effective plan to allocate enough fund and manage M & E activities in supporting and implementing various sustainable projects in the county?	2.896	.654
Staff are not entrusted with monitoring and evaluation have technical expertise in the area	3.642	.345
Average Mean	**2.765**	

Project Team Performance

The study sought to examine the determinants of project team performance in building construction projects in Nairobi, Kenya, attributed to the influence of project leadership, project communication, project management skills and monitoring and evaluation. The study was particularly interested in three key indicators, namely implementation within budget, schedule and scope, with all the three studied over a 5 year period, running from 2014 to 2018. The study findings revealed improved project team performance in building construction projects across the 5 year period running from the year 2014 to 2018. Project team performance in building construction projects within budget recorded low positive improvement with a majority affirming to less than 10% in 2014(38.7%) and 2015 (39.8%), to 10% in 2016 (30.9%) then more than 10% in 2017 (32.4%) and 2018 (30.4%). A similar trend was

recorded improvement of projects within scope, growing from less than 10% (32.8%) in 2014, to more than 10% in 2015 (28.3%), 2016 (28.5%) and 2017(27.3%). Project team performance in building construction projects within schedule further recorded positive improvement with a majority affirming to less than 10% in 2014 (38.9%) and 2015 (33.8%), to 10% in 2016 (22.5%) and 2017 (32.5%) then by more than 10% in 2018 (32.8%). It was deduced from the findings that key Project team performance in building construction projects indicators had considerably improved as influenced by among other attributes, the influence of project leadership, project communication, project management skills and monitoring and evaluation. Project team performance in building construction projects in time, within budget and scope have particularly improved by at least 10 percent across most of the projects pointing to the significance of project leadership, project communication, project management skills and monitoring and evaluation in the project team performance in building construction projects.

Table 5: Project Team Performance in Building Construction Projects

Project team performance within Budget	**2014**	**2015**	**2016**	**2017**	**2018**
Increased by less than 10%	38.7	39.8	30.9	32.4	30.4
Increased by 10%	32.8	28.3	28.5	27.3	28.5
Increased by more than 10%	28.7	32.1	40.3	40.9	41.5
Project team performance within Scope	**2014**	**2015**	**2016**	**2017**	**2018**
Increased by less than 10%	38.9	33.8	22.5	32.5	32.8
Increased by 10%	35.8	35.8	31.9	33.9	30.9
Increased by more than 10%	25.6	30.8	45.9	35.4	35.9
Project team performance within Schedule	**2014**	**2015**	**2016**	**2017**	**2018**
Increased by less than 10%	37.9	35.9	31.2	25.7	33.1
Increased by 10%	36.2	31.3	35.9	35.3	30.7
Increased by more than 10%	25.9	32.8	32.9	39	36.2

CONCLUSION

The study concluded that project leadership influence project team performance in the building construction projects in the study area. The regression coefficients of the study show that project leadership has a significant positive influence on project team performance in the building construction projects in Kenya. This implies that increasing levels of project leadership would increase the levels of project team performance in the building construction projects in Kenya.

The study concluded that project management skills influence project team performance in the building construction projects in Kenya. The regression coefficients of the study show that project management skills has a significant positive influence on project team performance in the building construction projects in Kenya. This implies that increasing levels of project management skills would increase the levels of project team performance in the building construction projects in Kenya.

The study concluded that project management skills influence project team performance in the building construction projects in Kenya. The regression coefficients of the study show that project management skills has a significant positive influence on project team performance in the building construction projects in Kenya. This implies that increasing levels of project management skills would increase the levels of project team performance in the building construction projects in Kenya.

Finally, the study concluded that monitoring and evaluation influence project team performance in the building construction projects in Kenya. The regression coefficients of the study show that monitoring and evaluation has a significant positive influence on project team performance in the building construction projects in Kenya. This implies that increasing levels of monitoring and evaluation would increase the levels of project team performance in the building construction projects in Kenya.

RECOMMENDATIONS

The study recommended that there is need to allow the project team to have sense of belonging in the management of the affairs in the projects. They can carry out higher responsibilities with other leaders with little supervision. The organization should ensure that the orders and help to achieve their vision and mission. The leaders and project team should be involved when important issues arise and retain decision making rights on the implementation of the project.

There is need to enhance proper communication during the implementation of the projects. The poor and distorted information slow down project implementation and lead to extra cost. There should be clear channels of communication to facilitate and eliminate the delays project implementation. The project team should have regular site meetings between the consultants and contractors, review and adjustment of communication reports. The information on work breakdown structure should be well understood to enhance the implementation of the county government construction projects.

The study recommended for the project management skills to the project team to enhance performance of artisanal and small scale mining projects in Kenya. The planning, communication, leadership and management skills of manager should be adequate. The project should be competent enough to manage the project and project managers should possess ability for decision making and conflict resolution.

The study recommended for the effective monitoring and evaluation to enhance sustainability of youth empowerment projects. There should be adequate M & E plan for continuous monitoring of project activities to enhance continuity. The roles and responsibilities of monitoring and evaluation personnel should be specified at the start of the project. The monitoring resources should be devoted to develop needed data and evidence-based evaluations in the projects in the county to enhance their sustainability. There should be a good M & E system in place to ensure it raises timely feedback of the progress of the projects in the county.

Areas for Further Research

A review of literature indicated that there was limited of research on the determinants of project team performance in building construction projects in the Kenyan context. Thus, the findings of this study served as a basis for future studies on other determinants of project team performance in building construction projects in Kenya. The effects of determinants of determinants of project team performance in building construction projects, has not been widely studied which presents gaps in African and Kenyan contexts. This study confined itself to determinants of project team performance in building construction projects in Nairobi County, Kenya. A comparative study should be carried out to compare whether the findings also apply for other projects in different regions in order to validate whether the findings can be generalized in Kenya.

REFERENCES

Abd El-Razek, M. E., Bassioni, H. A., & Mobarak, A. M. (2008). Causes of delay in building construction projects in Egypt. *Journal of Construction Engineering and Management*, *134*(11), 831-841.

Adamu, K. J., Dzasu, W. E., Haruna, A., & Balla, S. K. (2011). Labor productivity constraints in the Nigerian construction industry. *Continental Journal of Environmental Design and Management*, *1*(2), 9-13.

Aiyetan, A., Smallwood, J., & Shakantu, W. (2011). A systems thinking approach to eliminate delays on building construction projects in South Africa.*Acta Structilia*, *18*(2), 19-39.

Akinsiku, O., Akintola, A., Ameh, O., & Ige, A. (2014). Contributions of Construction Project Team to Cost Overruns: The Contractors' Perspective. In *Construction Research Congress 2014: Construction in a Global Network* (pp. 1528-1536).

Alaghbari, W. E., Razali A. Kadir, M., Salim, A., & Ernawati. (2007). The significant factors causing delay of building construction projects in Malaysia. *Engineering, Construction and Architectural Management*, *14*(2), 192-206.

Al-Kharashi, A., & Skitmore, M. (2009). Causes of delays in Saudi Arabian public sector construction projects. *Construction Management and Economics*, *27*(1), 3-23.

Alojairi, A. (2011). Project Management: A Socio-Technical Perspective.

Alshanbari, H. (2010). *Impact of Pre-Construction Project Planning on Cost Savings* (Doctoral dissertation, University of Florida).

Amaka (2010). "The critical success factors influencing project performance in Nigeria." *International Journal of Management Science and Engineering Management* 6.5 (2011): 343-349.

Ameh, O. J., Soyingbe, A. A., & Odusami, K. T. (2010). Significant factors causing cost overruns in telecommunication projects in Nigeria. *Journal of Construction in Developing Countries*, *15*(2), 49-67.

Andawei, M. E. M.(2014) Environmental Friendliness of Project Cost Management Process in Nigeria: The Role of the Quantity Surveyor.

Arogo, G. M. (2015). *Factors influencing completion of community-initiated projects: the case of Eldoret town, Uasin Gishu county, Kenya* (Doctoral dissertation, University of Nairobi).

Assaf, S. A., & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International journal of project management*, *24*(4), 349-357.

Auma, E. (2014). Factors Affecting the Performance of Construction Projects in Kenya: A Survey of Low-Rise Buildings in Nairobi Central Business District. *The International Journal of Business & Management*,*2*(12), 115.

Barasa, J. A. (2014). *Influence of board of managements' contribution to development of public secondary schools in Nyamira north district, Nyamira county, Kenya* (Doctoral dissertation, University of Nairobi).

Baxter, L. (2007). Problematizing the problem in communication: A dialogic perspective. *Communication monographs*, *74*(1), 118-124.

Brown, A. D., & Phua, F. T. (2011). Subjectively construed identities and discourse: towards a research agenda for construction management. *Construction Management and Economics*, *29*(1), 83-95.

Standard, A. (2011). Guide to the Project Management Body of Knowledge (PMBOK (R) Guide)–. In *Project Management Institute*.

Chavada, R., Dawood, N. N., & Kassem, M. (2012). Construction workspace management: the development and application of a novel nD planning approach and tool. *Journal of Information Technology in Construction*.

Chen, W. T., & Huang, Y. H. (2006). Approximately predicting the cost and duration of school reconstruction projects in Taiwan. *Construction management and Economics*, *24*(12), 1231-1239.

Chigara, B., & Mangore, E. (2012). An analysis of the implications of resources management on building projects performance in Harare and Bulawayo. *International Journal of Marketing and Technology*, *2*(9), 144.

Chigara, B., Moyo, T., & Mudzengerere, F. H. (2013). An Analysis of Cost Management Strategies Employed By Building Contractors on Projects in Zimbabwe. *International Journal of Sustainable Construction Engineering and Technology*, *4*(2), 1-13.

Chiocchio, F., Kelloway, E. K., & Hobbs, B. (Eds.). (2015). *The psychology and management of project teams*. Oxford University Press.

Chirisa, I. (2014). Building and urban planning in Zimbabwe with special reference to Harare: Putting needs, costs and sustainability in focus.

Darrington, J. W., & Howell, G. A. (2010). An optimized project requires optimized incentives. In *Proc. of the 18th Ann. Meeting of the IGLC*.

Doloi, H., Sawhney, A., Iyer, K. C., & Rentala, S. (2012). Analysing factors affecting delays in Indian construction projects. *International Journal of Project Management*, *30*(4), 479-489.

Durdyev, S., Ismail, S., & Bakar, N. A. (2013). Construction productivity in Turkmenistan: Survey of the constraining factors. *International Journal of e-Education, e-Business, e-Management and e-Learning*, *3*(1), 18.

El-Behary, H. (2013). High prices cripple the construction sector. *Daily News Egypt (Egypt) the Gale Group, Farmington Hills, Michigan*.

El-Gohary, K. M., & Aziz, R. F. (2013). Factors influencing construction labor productivity in Egypt. *Journal of Management in Engineering*, *30*(1), 1-9.

Enshassi, A., Mohamed, S., Mustafa, Z. A., & Mayer, P. E. (2007). Factors affecting labour productivity in building projects in the Gaza Strip. *Journal of Civil Engineering and Management*, *13*(4), 245-254.

Faridi, A. S., & El-Sayegh, S. M. (2009). Significant factors causing delay in the UAE construction industry. *Construction Management and Economics*, *24*(11), 1167-1176.

Frimpong, Y., Oluwoye, J., & Crawford, L. (2003). Causes of delay and cost overruns in construction of groundwater projects in a developing countries; Ghana as a case study. *International Journal of project management*, *21*(5), 321-326.

Fugar, F. D., & Agyakwah-Baah, A. B. (2010). Delays in building construction projects in Ghana. *Australasian Journal of Construction Economics and Building, The*, *10*(1/2), 128.

Githui, D. M. (2012). Ethical issues in the construction industry in Kenya: A critical analysis of the professional conduct in engineering technology management.

Gundecha, M. (2012). *Study of factors affecting labor productivity at a building construction project in the usa: web survey* (Doctoral dissertation, North Dakota State University).

Haughey, D. (2012). The project management body of knowledge (PMBOK).

Hoffman, G. J., Thal Jr, A. E., Webb, T. S., & Weir, J. D. (2007). Estimating performance time for construction projects. *Journal of Management in Engineering*, *23*(4), 193-199.

Hwang, B. G., Zhao, X., & Ng, S. Y. (2013). Identifying the critical factors affecting schedule performance of public housing projects. *Habitat International*, *38*, 214-221.

Jarkas, A. M., & Bitar, C. G. (2011). Factors affecting construction labor productivity in Kuwait. *Journal of Construction Engineering and Management*, *138*(7), 811-820.

Jerven, M. (2013). *Poor numbers: how we are misled by African development statistics and what to do about it*. Cornell University Press.

Kaliba, C., Muya, M., & Mumba, K. (2009). Cost escalation and schedule delays in road construction projects in Zambia. *International Journal of Project Management*, *27*(5), 522-531.

Kalsum, U., Hanid, M., Zakaria, N., Yahya, Z., & Lia, P. C. (2010). Assessing the performance of construction workers in Peninsula Malaysia. *International Journal of Engineering and Technology*, *7*(2), 47-60.

Kerzner, H. (2013). Project Management: A Systems Approach to Planning, Scheduling and Controlling. 2006 *Editorial John Wiley, Hoboken, New Jersey, ISBN*, *471225770*.

Khan, A. S., & Rasheed, F. (2015). Human resource management practices and project success, a moderating role of Islamic Work Ethics in Pakistani project-based organizations. *International Journal of Project Management*, *33*(2), 435-445.

Kikwasi, G. (2013, February). Causes and effects of delays and disruptions in construction projects in Tanzania. In *Australasian Journal of Construction Economics and Building-Conference Series* (Vol. 1, No. 2, pp. 52-59).

Koontz, H. (2010). *Essentials of management*. Tata McGraw-Hill Education.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Koushki, P. A., Al-Rashid, K., & Kartam, N. (2005). Delays and cost increases in the construction of private residential projects in Kuwait. *Construction Management and Economics*, *23*(3), 285-294.

Langat, D. K. (2015). *Factors influencing completion of construction projects in public secondary schools in Bomet east sub-county, Bomet county, Kenya* (Doctoral dissertation, University of Nairobi).

Le-Hoai, L., Dai Lee, Y., & Lee, J. Y. (2008). Delay and cost overruns in Vietnam large construction projects: A comparison with other selected countries. *KSCE journal of civil engineering*, *12*(6), 367-377.

Lo, T. Y., Fung, I. W., & Tung, K. C. (2006). Construction delays in Hong Kong civil engineering projects. *Journal of Construction Engineering and Management*, *132*(6), 636-649.

Love, P. E., Sing, C. P., Wang, X., Edwards, D. J., & Odeyinka, H. (2013). Probability distribution fitting of schedule overruns in construction projects. *Journal of the Operational Research Society*, *64*(8), 1231-1247.

Marcelino-Sádaba, S., González-Jaen, L. F., & Pérez-Ezcurdia, A. (2015). Using project management as a way to sustainability. From a comprehensive review to a framework definition. *Journal of cleaner production*, *99*, 1-16.

Mahdavinejad, M., & Molaee, M. (2011). The result of delayed projects on publics' satisfaction in Tehran. In *2nd International Conference on Construction and Project Management IPEDR. Singapore* (pp. 16-18).

Makulsawatudom, A., Emsley, M., & Sinthawanarong, K. (2004). Critical factors influencing construction productivity in Thailand. *The journal of KMITNB*, *14*(3), 1-6.

Mantel, S. J. (2011). *Project management in practice*. Wiley,

Marzouk, M. M., & El-Rasas, T. I. (2014). Analyzing delay causes in Egyptian construction projects. *Journal of advanced research*, *5*(1), 49-55.

Masieka, Z. J. (2012). *Factors influencing implementation of Adventist Development Relief Agency's educational projects in Nyamira County, Kenya* (Doctoral dissertation, University of Nairobi, Kenya).

Mayavi, P. M. (2015). *Influence of risk management process on the quality of construction of petrol station projects in Kenya: A case of petrol stations in Westlands constituency, Nairobi county, Kenya* (Doctoral dissertation, University of Nairobi).

McLeod, L., Doolin, B., & MacDonell, S. G. (2012). A perspective-based understanding of project success. *Project Management Journal*, *43*(5), 68-86.

Moyo, T., Mangore, E., & Chigara, B. (2014). Work Measurement Techniques Utilized by The Building Industry in The Midlands Province Of Zimbabwe. *International Journal of Sustainable Construction Engineering and Technology*, *5*(1), 42-52.

Musyoka, K. M. (2017). Determinants Of Implementation Of County Government Construction Projects In Nairobi, Kenya. *Strategic Journal Of Business & Change Management*, *4*(2).

Muchungu, M. P. (2012). *The contribution of human factors in the performance of construction projects in Kenya* (Doctoral dissertation, University of Nairobi).

Mugenda,O.Mugenda. A.(2003). Research methods Quantitative and Qualitative Approaches. *Nairobi: ACTS*.

Muya, M., Kaliba, C., Sichombo, B., & Shakantu, W. (2013). Cost escalation, schedule overruns and quality shortfalls on construction projects: The case of Zambia. *International Journal of Construction Management*, *13*(1), 53-68.

Ngacho, C., & Das, D. (2014). A performance evaluation framework of development projects: An empirical study of Constituency Development Fund (CDF) construction projects in Kenya. *International Journal of Project Management*, *32*(3), 492-507.

Nyakazeya, P. (2012). Construction sector to grow. *Financial Gazette*, *22*, 16.

Ochieng, E. G., & Price, A. D. F. (2010). Managing cross-cultural communication in multicultural construction project teams: The case of Kenya and UK. *International Journal of Project Management*, *28*(5), 449-460.

Ochieng, F., & Ruth, T. (2013). Factors influencing management of CDF projects: A case of Ainamoi Constituency, Kericho County. *International Journal of Science and Technology*, *2*(1), 1-15.

Ofori, G., & Lean, C. S. (2001). Factors influencing development of construction enterprises in Singapore. *Construction Management & Economics*, *19*(2), 145-154.

Ogunsemi, D. R., & Jagboro, G. O. (2006). Time-cost model for building projects in Nigeria. *Construction Management and Economics*, *24*(3), 253-258.

Oino, P. G., Auya, S., & Luvega, C. (2014). Women Groups: A Pathway to Rural Development in Nyamusi Division, Nyamira County, Kenya. *International Journal of Innovation and Scientific Research*, *7*(2), 111-120.

Olander, S., & Landin, A. (2005). Evaluation of stakeholder influence in the implementation of construction projects. *International journal of project management*, *23*(4), 321-328.

Olaoluwa, O., & Adeyemi, A. Y. (2009). Effects of placing methods on concreting productivity. In *Proceedings of The Botswana Institution of Engineers (BIE) Conference, Gaborone, Botswana* (pp. 154-161).

Ondari, P. O., & Gekara, J. M. (2013). Factors influencing successful completion of roads projects in Kenya. *International Journal of Social Sciences and Entrepreneurship*, *1*(6), 26-48.

Ondego, B., & Moturi, C. (2016). Evaluation of the Implementation of the e-Citizen in Kenya. *Evaluation*, *10*(4).

Rahaman, M. M. (2011). Access to financing and firm growth. *Journal of Banking & Finance*, *35*(3), 709–723.

Ringera, J. K. (2015). *Factors influencing completion of selected Kenya police service housing projects in central Kenya* (Doctoral dissertation, University of Nairobi).

Saka, N., & Lowe, J. (2010). An assessment of comovement between foreign direct investment (FDI) and South African construction sector (SACS) output. In *Procs 26th Annual ARCOM Conference. Association of Researchers in Construction Management* (pp. 83-92).

Sambasivan, M., & Soon, Y. W. (2010). Causes and effects of delays in Malaysian construction industry. *International Journal of project management*, *25*(5), 517-526.

Shehu, Z., & Akintoye, A. (2010). Major challenges to the successful implementation and practice of programme management in the construction environment: A critical analysis. *International Journal of Project Management*, *28*(1), 26- 39.

Siemens, G. (2014). Connectivism: A learning theory for the digital age.

Simushi, S. J. (2017). *An integrated management strategy to reduce time and cost overruns on large projects* (Doctoral dissertation, Stellenbosch: Stellenbosch University).

Soham, M., & Rajiv, B. (2013). Critical factors affecting labour productivity in construction projects: case study of south gujarat region of india. *International Journal of Engineering and Advanced Technology*, *2*(4), 583-591.

Sweis, G., Sweis, R., Hammad, A. A., & Shboul, A. (2008). Delays in construction projects: The case of Jordan. *International Journal of Project Management*, *26*(6), 665-674.

Tonnquist, B. (2008). *Projektledning*. Bonnier utbildning.

Turner, J. R. (Ed.). (2013). *Contracting for project management*. Gower Publishing, Ltd.

Ubani, E. C., Omajeh, E. O. M., & Njoku, U. A. P. (2015). Critical success factors for public sector construction project delivery: A case of Owerri, Imo State. *International Journal of Research in Management, Science and Technology*, *3*(1), 11-21.

Winch, G. M. (2010). *Managing construction projects*. John Wiley & Sons.

Winch, C. (2010). Vocational education, knowing how and intelligence concepts. *Journal of Philosophy of Education*, *44*(4), 551-567.

Xia, B., & Chan, A. P. (2012). Measuring complexity for building projects: a Delphi study. *Engineering, Construction and Architectural Management*,*19*(1), 7- 24

Yin, R. K. (2010b). *Qualitative research from start to finish*. Guilford Press.

Zami, M. S. (2011). Potentialities of contemporary earth construction addressing urban housing crisis in Africa–A lesson from Zimbabwe. *Plenary Paper Session I: Water*, 66.

Zint, M., & Montgomery, N. (2012). Evaluation: What is it and why do it. *available online on http://meera. snre. umich. edu/plan-an-evaluation/evaluation-what-is-it-and-why-do-itc last accessed 27th Jan*.

Zulu, S., & Chileshe, N. (2010). Service quality of building maintenance contractors in Zambia:a pilot study. *International Journal of Construction Management*, *10*(3),63-81.