

Influence of Project Scope Changes and Availability of Funds during Implementation Phase on Performance of Construction Projects at Mpesa Foundation Academy, Kenya

¹Bernard Mugo, ²Dr. Alice Simiyu

¹Masters Student, Jomo Kenyatta University of Agriculture and Technology, College of Human Resource Development, Department of Entrepreneurship, Technology, Leadership and Management, Nairobi, Kenya

²Lecturer, Jomo Kenyatta University of Agriculture and Technology, College of Human Resource Development, Department of Entrepreneurship, Technology, Leadership and Management, Nairobi, Kenya

Abstract: Governments and private organizations in different parts of the world handle projects that are of different complexity and magnitude. These projects have been characterized by delays, substandard deliverables and way beyond the budget as they are likely to be influenced by various risks during their lifecycle. Consequently, project(s) manager should embrace best practices in risk management during implementation phase in order to ameliorate performance of construction projects. Construction projects generally in the world, region and Kenya in particular run a high risk of being well over budget and considerably behind schedule, but how construction projects are influenced on by risk management during implementation phase is a research gap that this study sought to fill. The overall objective of this research was to assess influence of risk management during implementation phase on performance of construction projects in Kenya, a case of Mpesa Foundation Academy Project. The specific objectives of the study were to determine influence of project scope changes, selection of the project team, availability of project funds and project site selection on performance of construction projects. Literatures were reviewed as views and opinions of various authors were sought in the area under study. The relationship between dependent and independent variables was presented in a conceptual framework. Based on a case study design methodology, the study had a target population of 240 employees and stratified random sampling was used to draw a sample size of 72 respondents. Both quantitative and qualitative data was collected using questionnaires, interview and document analysis guides. Data analysis was accomplished by generation of frequencies, percentages, tables and figures. To describe the significance of the relationships between variables under research, Chi-Square analysis was used. Based on the objectives, findings show that project scope changes are inevitable, inadequate project funds and long approval procedure of project budget negatively influences project performance : in order to achieve intended results and necessity for all construction projects to be adapted to the reality of environment in which they are being implemented in and funds availability ensures acquisition of resources to accomplish project activities: therefore application of risk management is essential. There was statistically significant evidence on the relationship between independent variables and performance of construction projects, implying that there is significant influence on performance by the independent variables. However, this research identified ineffective level of risk management practices since majority of the practices were informal and most of the construction team members had not studied risk management or project management. The study therefore recommends that management of the Foundation should put in place sound, comprehensively structured and formal risk management practices with involvement of all construction professionals and end users during project implementation phase of construction projects. In order for employees to deliver as required, acquisition of necessary skills needs to be done through regular trainings by management.

Keywords: Project Management, Project Scope, Project Risk Management, Project Team, Project Funding, Project Performance.

I. INTRODUCTION

A project is a temporary effort with a defined beginning and end (usually limited in time and often constrained by funding or deliverables), undertaken to achieve unique goals and objectives, typically to bring about beneficial changes or added value (PMI, 2013). Due to the temporary nature of projects, they contrast with business as usual (or operations), which are repetitive, permanent, or semi-permanent functional activities to produce products and/or services. In practice, the management of these two systems is often very different and, as such requires the development of distinct technical skills and management strategies. As activities of projects may range from the construction of a new infrastructure to the introduction of new ways of working, there is no one typical project. Projects cover issues such as: social development, health, environmental sustainability, institutional strengthening, technical implementation, pilot plants, service delivery, social marketing, hygiene promotion, sanitation promotion and capacity building. Project management is the discipline of planning, organizing, motivating and controlling resources to achieve specific goals (PMI, 2013). The main challenge of project management is to achieve all goals and objectives of the project while respecting the preconceived constraints.

The primary constraints are scope, time, budget and quality. The more ambitious challenge and secondary constraint is to optimize the allocation of needed inputs and integrate them to achieve pre-defined objectives. Cooke-Davies (2001) identified factors linked to successful project management and factors leading to successful projects. These factors helps in ensuring the project success is to be completed on time, and to be completed within budget. This was supported by Davis and Papakonstantinou (2012) adding that projects can be considered as a failure when not delivered on time, within budget, within scope, to the right quality or not being environmentally sustainable. Developing countries are faced with the problem of scarce project financial resources that have a lot of influence on the success or failure on the construction projects. Construction has an important role in the economy of many countries and especially developing countries. The construction industry contributes to the Gross Domestic Product (GDP) and employment rate of many nations and for this reason it is considered vital for the economic development of any nation (Olwale & Sung, 2010). It provides the infrastructure by constructing the physical facilities required for the production, distribution of goods and services and housing of the entire population of a country or nation.

Construction projects' comprises of five major phases namely initiation, planning and design, implementation, monitoring and control, and termination (closure). Initiation entails conception of the idea which is taken through the process of screening and a concept note is developed with respect to a need. It makes all members of the project team aware of the basic parameters of the project - the project description, boundaries, funding, and schedule. Poor understanding of any of these elements can mean that the project goes astray during implementation, and can result in costly and/or time consuming changes. Planning and design is the portion of the project management process that produces the Construction Project Management Plan (CPMP). The CPMP defines the project performance baseline—the project deliverables, schedule and budget plans—and the management methods to be used by the project team to deliver the project. Project team's detailed goals for the performance of the project within the scope, schedule, and budget parameters established by the organization management are documented in the project performance baseline documents which includes: scope - the deliverables to be produced by the project team, schedule - the logical sequence of work and related milestones, budget - the allocation for the project, and risk – potential risks to the project (NETSSAF, 2008).

Implementation is the actualization of the idea that has been developed as a need after planning. Implementation simply means carrying out the activities described in your work plan (NETSSAF, 2008). Executing a project in the construction sector is a very complex mission, as it requires the coordination of a wide range of activities, the overseeing of a team, the management of budget, the communication to the public, diverse institutional arrangements, different time frames among other issues (DFID, 1998). Project execution (implementation) is the phase where visions and plans become reality to the dreamer being the logical conclusion after evaluating, deciding, visioning, planning, applying for funds and finding the financial resources of a project. Objectives of the implementation phase are: putting the action plan into operation, achieving tangible improvements and value-added change as posited by Philip *et al.*, (2008), ensuring that new infrastructure, new institutions and new resources are sustainable in every aspect, ensuring that any unforeseen conflicts that might arise during this stage are resolved, ensuring transparency with regard to finances and ensuring that potential benefits are not captured by elites at the expense of poorer social groups (Moriarty *et al.*, 2007). Monitoring and controlling is a continuous process that checks what was planned that it is being done (PMI, 2008) which comprises of processes performed to observe projects as they are being executed such that potential problems can be identified in timely manner and corrective actions are taken when necessary to control implementation of construction projects. Regular measurement of construction projects' performance and any quality mechanism put in place against the predicted

expectation of the project plan is necessary. Project termination is the last phase of the project lifecycle that involves the process of closing the project. This includes transferring the completed work and remaining project responsibilities to others; demobilizing the project team and facilities; documenting lessons learned; archiving; and closing out the administrative and financial processes of the construction project (PMI, 2013).

Each phase has its own typical risks. In theory, risk is usually defined as a positive or negative deviation of a variable from its expected value (ICE, 2005). In order to turn risks into chances, the project owner must first know his/her risk sufficiently well. Risk management constitutes a strategy to avoid losses and use available chances or rather chances potentially arising from risks. The strategy demands from the person taking action a precise consideration and assessment of the situation and the scenarios probably occurring in the future. On this basis, decisions are made in the hope of having eliminated all risks and used all chances. This means recognizing potential risks and circumventing a threat by averting, evading or reducing their negative effects.

The risks at planning phase include poor scope definition, poor estimates on time and cost, and budget based on incomplete data. The implementation phase is often plagued by risks such as over-design, poor constructability, poor estimating on time and cost, scope creep, poor site selection for the project, incomplete documents, poor contracting strategy, selection and competence of the project team, insufficient competition and fraud in the bidding process, risks of change orders, delays in releasing of funds, project scope changes, and quality concerns. The risks at project close out or termination stage includes snag/punch lists issues, insufficient time for resting and commissioning, claims and lack of acceptance by the stakeholders or end users (PMI, 2013). Destructive consequences for construction projects during implementation phase may occur due to risk and uncertainty (Flanagan, Norman & Chapman, 2006). ISO 31000 defines risk as the effect of uncertainty on objectives, which means that the effect may be either positive or negative. Since people hold different views and have different understandings of a particular risk's components, sources, probabilities, consequences and preferred actions, there is risk variance in perception at both individual and organizational levels (Loosemore, 2006). People's beliefs, attitudes, judgments and feelings are believed to influence risk perception to a certain extent (Akintoye & MacLeod, 2003).

Project Management Institute (PMI) defines project risk as an uncertain event or condition and that the occurrence has positive or negative effect on at least one project objective, such as time, cost, scope or quality (PMI, 2008). Project risks often tend to be interrelated, but they can sometimes be considered in isolation. Project risks can not only affect the achievement of project objectives but also influence the occurrence of one another. In the construction industry, project risk is often referred to as the presence of potential or actual threats or opportunities that influence the objectives of a project during construction, commissioning, or at the time of use (ICE, 2005). Risk often varies in the likelihood of its occurrence and its impacts from one project to another and risk changes its nature during the project lifecycle (Smith, 2006). Lack of project information, particularly in the early stage of a construction project, always leads to a higher degree of risk at the implementation phase associated with cost, time and quality. Rapid development of construction projects has effectively facilitated increase in construction projects' risks (Lientz & Larssen, 2006).

Santoso, Ogunlana and Minato (2003) found managerial and design factor to be the major and most significant risks in a high-rise construction project in Jakarta, in terms of frequency and risk impacts. Fang, *et al.*, (2004) found that the most significant risk events are financial risks, owners' delaying payment and owner's unreasonable upfront capital demand in China. In construction projects, risks play a significant part in decision making and may affect the performance of a project. If they are not dealt with sensibly, they may cause cost overruns, delays on schedule and even poor quality. Each project has a different level and combination of risks and sites will adopt different strategies to minimize them because the characteristics of projects are unique and dynamic. Among the nine knowledge areas propagated by the Project Management Institute (PMI, 2008), risk management is one of them. The project manager must be able to recognize and identify the root causes of risks and correlate them to their effects on project performance. Major decisions and influence on the choice of alignment and selection of construction methods are made at the planning and implementation stages of a project, making risk management at these stages essential (Eskesen, Tengborg, Kampmann & Veicherts, 2004). In construction project management context, risk management is a comprehensive and logical way of risk identification, risk analysis and risk response with a vision to achieving project objectives (ICE, 2005).

Effectiveness of risk management (RM) in construction project management has been questioned in the past years (Coles & Moulton, 2003). Although, Lee and Chun (2009) found that 51% of construction projects experience failure attributed to incidences of risks even though there is well developed, designed and implemented process of project RM such as risk

management planning, risk identification, risk assessment, risk analysis and risk response planning. Implementation of construction projects poses the greatest risk for the project to deliver on its deliverables as agreed with the client. A government report in America demonstrates that over 80 percent of construction development projects have failed in whole or in part due to ineffective poor risk management (Lientz & Larssen, 2006). An effective risk management system not only brings a higher level of awareness of the consequences of risk but also focuses on a more structured approach, more effective centralized control and better transfer of risk information between parties that influence reducing long-term loss expenses and project time overruns (Edwards, 1995). Successful risk management should convert uncertainty to risk and convert risk to opportunity. The project and organization would hence achieve more gains by maximizing opportunity, minimizing risk and reducing uncertainty. Sundararajan (2004) stated that “if risk events are not handled and managed properly, consequences like increasing the financing cost, changing the capital structure, delay the building or facility operation, overrun budget, loss of the cash inflow, liquidated damages claim, production of poor quality end product, and involvement of rework after completion of the project might occur”.

Risk identification is the first step in the risk management process. This entails determining risks that could have an impact, either positive or negative on the project’s objectives (PMI, 2013). There are various techniques for identifying risks including use of checklist, decision driver analysis, SWOT analysis, brainstorming and assumption analysis (Wet & Visser, 2013). The Project Management Institute (2013) recommended use of a risk breakdown structure (RBS). An RBS is a diagrammatic tool that helps project teams to decompose the risks that their project is likely to encounter into various categories. These categories include technical risks, external risks, organizational risks, and project management risks. Best practices in risk identification include encouraging all team members to identify risks, considering organizational and environmental factors, involving stakeholders, development of a risk register and revising the risk register regularly. In their study, Kipyegen, Mwangi, and Kimani (2012) found that for organizations to develop prudent risk identification culture they must create awareness, train staff, create policies and standards to govern risk identification process and develop a mechanism for motivating staff to adhere to risk identification policies and standards. A study by Tadayon, Jaafar, and Nasri (2012) assessed risk identification practices in late construction projects in Iran and noted that risk identification was an important step in risk management process as it enables project managers to identify suitable methods of managing risks. Findings of the research showed that brainstorming was the most popular method of risk identification and that the experience of project managers was critical to the process of identifying risks. In their study, Otniel, Nicolae, and Claudiu (2012) found that there were two main approaches in which projects handle risks: evaluation approach and the management approach. However, regardless of the chosen approach, a standard method for identifying, assessing, and responding to risks must be used in any project in order to increase chances of project success.

Risk analysis is the process of providing a deeper understanding of the potential risks that a given project faces (Kendrick, 2009). Risks are analyzed on the basis of two factors; probability of occurrence and their impact on projects. The goal of risk analysis process is to rank and prioritize risks so as to determine which risks are significant enough to warrant treatment. The rationale for risk analysis process is that not all risks are worth the project team members’ attention (PMI, 2013). In order to optimize use of resources, project teams need to focus on risks that have a large probability of occurring and/or have significant impact on the project. Risk analysis methods can be divided into two broad categories: qualitative and quantitative risk analysis. Qualitative risk analysis methods include brain-storming, descriptive analysis, direct judgment, root-cause analysis, fishbone diagram, failure mode and effect analysis (FMEA), historical data, use risk rating scales, and the Delphi technique (Heldman, 2011). Quantitative risk analysis techniques include parametric/ statistical estimation, simulation, sensitivity analysis, scenario analysis, and probability analysis (Wet & Visser, 2013). The risk analysis exercise should enable the project team to rank all the identified risks from the most to the least important risk and determine which risks they should pay significant attention to.

Risk treatment, also known as risk response, is a step in the risk management process that entails selecting and implementing measures to modify the most significant risks that a given project is likely to encounter (Kendrick, 2009). Risk treatment strategies can be divided into four main categories: avoidance, transfer, mitigation, and acceptance. The risk treatment strategy adopted by a given organization or project is determined by risk appetite and risk tolerance (PMI, 2013). Risk appetite refers to the amount of uncertainty that the organization or project can accept while risk tolerance refers to the amount of impact that a given organization or project can withstand. In their study, Bhoola, Hiremath, and Mallik (2014) assessed risk treatment strategies that were practiced in software development projects in India. The study involved 302 project managers from various IT firms. Results of the study revealed that mitigation strategy had the most significant impact on success of software development projects. Acceptance, avoidance, and transference strategies were

only manifested in the form of transparency in communication to stakeholders, coordination between project stakeholders, and careful study of nature. In their study, Luppino, Hosseini, and Rameezdeen (2014) found that effectiveness of risk treatment strategies is closely connected to the quality of risk analysis process. They investigated two case studies that had deployed the failure mode and effect analysis (FMEA) and found that the method facilitates identification of effective contingency plans for mitigating high-priority risks.

Many projects do not have structured strategies for responding to risks and action plans for implementing these strategies. Project risks keep changing as the environment in which the project is being implemented changes. As the project environment changes, some new risks may emerge and some existing risks may disappear (Heldman, 2011). Consequently, risk management should not be one-time event, but a continuous and progressive process. Risk control practices help to turn risk management into continuous process. Risk control has two main components: risk monitoring and risk review. Risk monitoring entails continually assessing risks that have been identified and risk treatment strategies that have been implemented so as to ensure adherence to the risk management plan (Kendrick, 2009). Risk review is the periodic assessment of the effectiveness of the risk, actions taken to treat risks, and the environment in which the project is being implemented.

Risk control best practices include: conducting risk audits, variance and trend analysis, setting timelines for implementing risk treatment strategies, keeping records, providing feedback to stakeholders, and establishing formal procedures for tracking and reviewing risks (Heldman, 2011). The risk monitoring and review processes should also be open to and inclusive of all stakeholders. In their study, Kishk and Ukaga (2008) found that projects that managed risk on a continual basis had better outcomes than projects that did not undertake risk management continuously. This finding highlighted the importance of risk monitoring and review to the process of risk management. Research findings by Bedard, Deis, Curtis, and Jenkins (2008) in their research examining factors that determine the effectiveness of risk monitoring and control practices among Indian banks revealed that availability of formal monitoring and control procedures, independence of auditors, level of application of electronic decision aids, communication, and effectiveness in instituting corrective measures were some of the factors that influence the effectiveness of risk monitoring and control exercises. Although the study was not done in a project environment, some of these factors also apply to projects.

Therefore, project risk management continues to be a major feature of the project management of construction projects in an attempt to deal with uncertainty and unexpected events and to achieve project success. Mitigating risks by lessening their impact is a critical component of risk management process as enshrined in project management. Implemented correctly, a successful risk mitigation strategy should reduce adverse impacts and take advantage of the emerging opportunities, thus contributing to the success of the project being undertaken. In essence, a well-planned and properly administered risk mitigation strategy is a replacement of uncertain and volatile events with a more predictable or controlled response (Chapman & Ward, 2007). The implementation stage provides the greatest opportunity in the project lifecycle to govern and control scope, costs, schedule and quality requirements through sound risk management practices (Wallace & Blumkin, 2007). The risk management practices required at this stage include risk profiling and identification, the needs identification and validation, human resource planning and validation, preliminary budget and schedule development based on complete data and past experience as exemplified by various techniques such as expert judgement, analogous estimation (top-down), parametric estimation, three-point estimation and reserve analysis. Risk profiling involves finding an optimal investment risk by considering the risk required, risk capacity and risk tolerance of the client.

Construction Projects in Kenya:

One of the major industries contributing significantly to the socio-economic development growth as found by Choge and Muturi (2014) is the construction industry. The construction sector in Kenya is a key potential driver of economic growth (Government of Kenya, 2014). Part of the expenditure is on construction projects as the country rebuilds its basic infrastructure after many years of underdevelopment in most of the underdeveloped areas of the country, damages due to the El-Nino floods and the 2007/8 post election violence and in an endeavour to achieve Vision 2030. The construction industry is plagued by project expenditure exceeding the budget, delays in completing the projects in time and lack of acceptance by the stakeholders or end users at project completion. The construction industry involves several players and is inherently advanced in its definition because it involves construction works like housing, commercial buildings, highways, utility and industrial business parks (Clough, *et al.*, 2005). Most construction work in Kenya involves new public and private infrastructural projects that are conceptualized due to the needs that arise within the societal perspective of either a product and/or service.

Construction projects are exposed to risks arising from planning, design and construction complexity, many players, use of many resources and their availability, unpredictable environmental factors, the continuously changing economic and political environment and statutory regulations. These risks emerge during project scope changes' process, selection of the project team, availability of project funds and also project site selection. These processes if not well managed pose a great risk to the project that may lead to the project failure in terms of project cost overrun, scope creep, poor schedule performance and lack of acceptance of the project by the beneficiaries after completion. Risk management strategies are important to create values to a project and improve construction project performance in terms of cost, time and quality. Nevertheless, implementation of risk management strategies is wanting in most of the existing construction companies in Kenya resulting to construction projects failure through increased cost overruns, schedule slip and poor quality performance. Whereas confidence in estimates and decisions seem to increase, standards of many of risk management aspects have come under criticism for having no measurable improvement on risk. For example, it has been shown that one in six IT projects experience cost overruns of 200% on average, and schedule overruns of 70% (Flyvbjerg & Budzier, 2011).

Mpesa Foundation Academy Project:

Everything begins when you get ideas and put them on paper for them to be screened and analysed. This is the case for Mpesa Foundation Academy project that was driven by the strategic direction of the Safaricom Foundation on thematic area of education. The Mpesa Foundation Academy project was established in 2010 and sponsored by Safaricom Limited through its corporate social responsibility arm, Safaricom Foundation. Over Ksh 1.8 billion (approximately US\$ 18 million) have been invested in education, health, economic empowerment, the environment, arts and culture, music, sports in addition to response to disasters and humanitarian emergencies (Safaricom, 2015). With its first strategic direction already outlined, the Mpesa Foundation Academy was proposed as a project to achieve its first objective of the foundation. Plans to construct a state of the art learning institution were put in place and ground breaking ceremony was done in May 2015. The Mpesa Foundation Academy project, is located along Thika - Mangu Road, 6 kilometres off the Thika Superhighway, in Kiambu County. The project budget outlay was in the tune of Ksh. 3 billion that enabled building of classrooms, accomodation blocks, playing fields and also other social ammenities such as water and electricity. The total cost budget was financed through 100% funding by the Safaricom Foundation. The vision was to build a school that accommodates upto 1,000 needy students by Safaricom Foundation of Safaricom Limited, joining a list of blue chip companies that are spending billions of shillings to educate disadvantaged children. The secondary school dubbed the Mpesa Academy is built on a 50-acre piece of land in Thika (Safaricom, 2015).

II. STATEMENT OF THE PROBLEM

Construction projects' success is indicated by its performance in the achievement of project scope, time, cost, quality, safety and environmental sustainability objectives (Zhou, Zhang & Wang, 2007). Despite efforts by all players in the construction development industry, many construction projects in the world, region and in Kenya run high risk of poor performance by being well over budget and significantly late. The industry has a reputation for cost and time overruns due to the fact that the construction industry is one of the riskiest of all business types as Clough and Sears (2005) opines. It is feasible to improve strategies of risk management to minimize their negative impact on construction projects even when some level of poor cost and schedule performance is inevitable, thus improving project performance. In order to manage projects effectively and increase chances for projects' success, it is important to employ effective risk management strategies during implementation stage. Project risk management completely influences project performance by instrumental effects through creation of a contingency set up or by influencing project time, budget or design plan. However, construction projects in developing countries such as Kenya continue to experience failure due to ineffective risk management at the implementation phase, cost controls, inappropriate building regulations and codes as well as lack of basic project planning and provisions during implementation phase (Zwikael & Ahn, 2010). Kenya has seen a significant rise in infrastructure developments in the recent past, especially in the fields of construction development industry. However, many construction projects have failed to achieve project success due to increased risk and uncertainty during implementation phase.

III. RESEARCH OBJECTIVES

The study sought to assess influence of risk management during implementation phase on performance of construction projects in Kenya, with specific objectives of the study being to determine influence of project scope changes and to examine influence of availability of project funds during implementation phase on performance of construction projects at Mpesa Foundation Academy Project in Kenya.

IV. LITERATURE REVIEW

In research, theories play a critical role in the process as they provide researchers with a tool for guiding data collection, analysis, and interpretation tasks (Wolf, 2015). They provide the frame of reference that forms the basis for observation, definition of concepts, development of research design, and interpretation of findings.

Uncertainty Theory:

Uncertainty theory was introduced by Liu (2009) due to generalization of domain of uncertainty. Uncertainty theory was also applied to uncertain logic by Liu (2010) in which the truth value is defined as the uncertain measure that the proposition is true. Uncertainty is, of course, not a neglected concept in project management. Early development of activity network techniques in the 1950s, such as Program Evaluation and Review Technique (PERT), recognized the possibility of variation in task durations. These techniques were extended in the 1960s to incorporate probabilistic branching for instance Graphical Evaluation and Review Technique (GERT). Qualitative approaches, such as the Synergistic Contingency Evaluation and Review Technique (SCERT), and Analysis of Potential Problems (APP), were developed to guide project managers to prepare for uncertainty with risk prevention and contingency planning (Henriksen & Uhlenfeldt, 2006). The world is dynamic which makes it being a collection of changes. Many things experience unexpected and inevitable changes. The knowledge area of project management has to manage changes too. Therefore changes are to happen in projects through integration into the existing project scope statement through use of a change process that is well defined.

Kerzner (2013) states that scope changes can occur during any project lifecycle phase for the reason that it is natural of humans not capable to completely describe the project or the plan to execute the project at the initial stage. Decisions should ideally be made under conditions in which all factors of influence and the decision-making methods results in predictable outcomes. However, decision-making often happens under conditions of risk and uncertainty. Construction projects never run under the ideal conditions of certainty. This emphasizes the need to take a systematic approach when analyzing and understanding risks rather than focus on the impact of the risks on one component of the project. Project teams are encouraged to consider how various components of the projects are interrelated and how interference in one component will affect the other components of the project. This perspective of analyzing risk enables project teams to come up with a more realistic and holistic evaluation of the impact of certain risks. Thus, foreseen uncertainty requires disciplined risk management, the identification of potential risk that can affect the project followed by the planning of preventive measures to block adverse events and multiple contingent courses of action that are triggered by events especially during the implementation phase of a project (Young & Jordan, 2008).

Logical Framework Approach Theory:

Logical Framework Approach (LFA) is a planning and design tool that was developed in 1970 using ideas from Peter Drucker's Management by Objectives (Nadel, 2012). This is a model that is commonly used by large international assistance organizations to plan and manage development projects. This framework uses a top down, waterfall approach for planning project activities where planners begin by defining the goal of the project, then use the goal to develop the expected outputs of the project, identify activities required to achieve the objectives and finally resources or inputs required to perform the activities. Planners are required to identify indicators of achievement, means that will be used to verify results, as well as risks and assumptions that underline the projects making LFA a useful model for managing project risks (Odhiambo & Ngugi, 2014). The LFA requires the project team to undertake some form of risk assessment in order for them to receive funding for their project before the commencement of the project implementation phase. Thus in terms of costs, techniques such as reserve analysis are used as a risk management strategy and also use of floats (buffer) in task durations.

Enterprise Risk Management (ERM) Theory:

The Enterprise Risk Management (ERM) framework of managing risk emphasizes the active involvement of senior company executives and participation of all employees in the risk management process of identifying, analyzing and responding to a wide range of company risks (Hallowell, Molenaar, & Fortunato, 2013). ERM is a risk management theory that advocates for the measurement and management of all significant risks facing a given entity rather than the management of each risk independently (Nocco & Stulz, 2006). It seeks to aggregate the risk management silos within an organization into one comprehensive framework. This concept encourages entities to shift from the paradigm where the exercise for managing risks is left to one or a few people to a paradigm where all members of the organizations are

involved in the management of risks. Clear policies and processes for managing risks are key tenets of the ERM model. The theory contends that organizations can improve their risk management capacity having formal policies that define their risk appetite and tolerance, strategic goals, and systematic processes for identifying, analyzing, treating, and controlling risks (Olson & Wu, 2010). It also emphasizes the creation of a risk management culture where all stakeholders are mutually accountable and empowered to manage risks. ERM practices are associated with increased stakeholder confidence, increased competitive advantage, and long-term viability of organizations (Cormican, 2015).

V. CONCEPTUAL FRAMEWORK

The independent variables and dependent variable were presented in a conceptual framework as shown below.

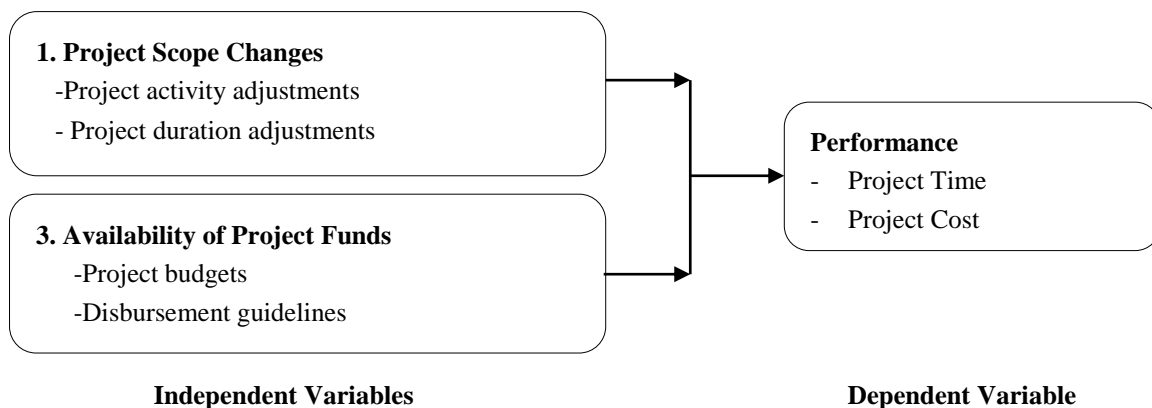


Figure 1: Conceptual Framework

Project Scope Changes and Performance:

The World Bank group (2007) observed that monitoring and evaluation (M&E) helps organizations reflect on past performance and guide constructive change during project implementation. Waithera and Wanyoike (2015) noted that M&E activities are critical in the project management cycle. Monitoring was identified as being instrumental in tracking performance of a project in a continuous basis in order to ensure that implementation conforms to the project plan. Tache (2011) concluded that project monitoring helps provide a background for bringing down schedule and cost overruns while making sure that quality standards are attained during project implementation. On the other hand, conducting evaluation facilitates the project team to ascertain the effectiveness of the project undertaking in regard to meeting the pre-established objectives (Waithera & Wanyoike, 2015). Khan (2006) asserts that successful implementation of a project hinges on successful scope management by the project manager and the project team. Scope changes during project implementation are common and should not worry a project manager but rather should be managed in order to mitigate negative impact on the project. Such changes may be communicated through verbal instructions or written instructions and normally fail to understand the magnitude of change. It is imperative that key stakeholders are informed of any changes in scope that affects the cost, schedule and quality of the project.

Mohamad Farazi (2010) in his study of the public construction industry in Malaysian school computer laboratories examined the project success factors throughout project lifespan for 357 projects and used five success factors to investigate the project conceptualization. The inadequacy in project definition and project planning was extended to project implementation phase. Failure to consider and clarify stakeholders' expectations and concerns at early stage in the project can result in extraordinary risks being ignored and may lead to difficulties in running the project during implementation due to scope changes, and hence poor performance (Atkinson, Crawford & Ward, 2006).

Availability of Project Funds and Performance:

According to the report by PwC (2014), access to funds in many government projects in Africa is limited and is a challenging factor. The report also mentioned internal capacity limitations and corruption as factors reducing funds access to projects. The PwC report observed that 90% of the projects sampled had delivered the expected positive impact or benefit to the stakeholders. Project delays coupled with cost overruns were highlighted as significant challenges facing government funded projects in Africa. The report by PwC advocates for public-private partnership in the funding of large-scale projects in developing nations in order to reduce cost overruns. McGrath (2008) opined that getting funding

approval for large-scale government projects is challenging globally. According to Wells (1986), most developing countries including Kenya, interact in nearly half or altogether within the construction of civil engineering projects like power projects, irrigations, transport, drainage, water and housing projects among others. As these projects pass through different phases of project lifecycle, the cost of risk event occurring increases gradually thus affecting project outcome. Such projects are exposed to different sources of risk which can be either internal or external to the organization like inflation, market acceptance, exchange rates and government regulations. Bing, *et al.* (2007) also conducted factor analysis of the 18 critical success factors and argued that appropriate factor groupings revealed the following factors i.e. effective procurement, project implementation, government guarantee, favorable economic conditions and available financial market which they say influences policy development towards PPP and the manner in which partners go about the development of PFI projects.

Performance in terms of Cost and Time:

Project costs involves resource planning, cost estimating, cost budgeting and cost control as stated by Heldman (2011). Other components in the project cost management such as resources, budget among others will have to change as construction project scope changes. Richman (2006) supports this idea by stating that project cost includes processes and activities that ensure the project is completed within the approved budget which involves cost estimating, cost budgeting and cost control. This indicates that if the scope is changed, it will affect the budget. The initial budget has to be modified to the requirement of current project scope. Decision making and improvement of the quality of the deliverables is assisted by adjustment of the budget estimates to changes in the construction project scope. This also helps the project not to face financial problems during implementation. De Furia (2008) has found out that any scope change for the project produces unwanted cost variance. In the same regard, Hill (2010) says that any change to the project scope almost always necessitates a controlled adjustment to project cost. Cost estimates are developed approximation of the monetary resources needed to complete project activities as defined by Project Management Body of Knowledge guide (PMI, 2008). The accuracy of cost estimates starting from the planning phase of a project through to the closure stage has a lot of effect on the success or failure of a construction project.

The project duration includes a planned start date and a planned finish date for each activity which includes the processes and activities needed to ensure timely completion of the project. It consists of activity definition, activity sequencing, activity resource estimating, activity duration estimating, schedule development, and schedule control (Richman, 2006). When project duration is not controlled well, the project is likely to experience challenges in terms of schedule which may affect the project success negatively. Project time management is concerned with setting duration of the project plan activities, devising a project schedule, and monitoring and controlling deviations from the schedule (Heldman, 2011). Time management is a vital facet of project management as a result of it keeps the project activities on course and monitors those activities against the project plan to make sure the project is completed on time. When project scope requirements' is approved, it has to imply on project time. As stated by De Furia (2008) that determining and documenting change of project scope are an important part of control which impact project schedule. Any scope change for which the project is not reimbursed produces unwanted schedule variance. Even scope changes that are reimbursed cause schedule variance. With every scope change, precious project resources are diverted to activities that weren't identified within the original project scope, resulting in pressure on the project schedule. The project manager must also consider impact on the project's critical path and make adjustment accordingly to accommodate the new changes rest they lead to schedule overrun. A project schedule could also be given in a summary type referred to as master schedule or milestone schedule or could also be given in detail in terms of network diagrams. Often, the project schedule is presented graphically using milestone charts, bar charts and project schedule network diagrams.

The schedule baseline is a key element in control and time management during project implementation stage. Through measurement, comparison and analysis of schedule performance like actual start and end dates, percent complete and remaining period of ongoing work, construction project time performance is established.

VI. RESEARCH METHODOLOGY

The study adopted descriptive case study design. Yin (2014) defines descriptive case study design "as an empirical inquiry that investigates a contemporary phenomenon within its real-life context and in which multiple sources of evidence are used." This design provides a great depth of responses resulting in a better and elaborate understanding of the phenomenon under study. This research design involves gathering data that describes events and then the data is organized, tabulated, depicted and described. Descriptive studies portray the variables by answering who, what and how questions (Babbie, 1998).

In research, a population is a group of individuals, objects or items from which samples are taken (Kombo & Tromp, 2006). A population refers to an entire group of persons or elements that have at least one thing in common that the researcher wishes to investigate. The target population for this study comprised of 240 employees working at the Mpesa Foundation Academy Project. Sample size is “the number of individuals or objects in the sample” (Peck, Olsen & Devore, 2009). Random sampling is the probability whereby people, place or things are randomly selected (Kombo & Tromp, 2006). According to Kothari (2004), a stratified random sampling is used where the population embraces a number of distinct categories, the frame can be organized by these categories into separate "strata". A sample was taken through stratified random sampling from administration, project, finance and liaison departments (strata). The sample size for the study was 72 respondents, comprising of 30% from each of the departments of the Foundation. Mugenda and Mugenda (2003) indicated that a sample size of 10% to 30% is sufficient for a study. Since the study population was not large, a 30% of the population was considered adequate to select a sample size of respondents.

Primary data are acquired directly from original sources whereas data collected indirectly from reports and publications are referred to as secondary (Chandran, 2004). The primary data for this study was collected using both the questionnaires and interviews. The study used questionnaires because it was flexible and facilitates the capture of in-depth knowledge of the respondents, promotes respondent cooperation and allows probing further for clarification of issues. According to Babbie (1998) this allows for intensity and richness of individual perceptions in respondent responses. As a tool for data collection, questionnaires are appropriate because they are easy to analyze and are cost effective (Andersen, *et al.*, 2004). According to Kumar (2005), interview is a common method of collecting information from individuals. Using face to face interviews, the researcher collected in-depth data after administering the questionnaires (Mugenda & Mugenda, 2003). Document analysis was used to collect secondary data on project cost and time from existing records.

An interactive process by which answers are examined to see whether the results are relevant to each research question is defined as data analysis (Backstrom & Hursh-Cesar, 1981). The collected data was examined and checked for completeness and comprehensibility. Data was then summarized, coded and tabulated. Descriptive statistics such as frequencies and percentages distribution, mean, and standard deviation were used to analyze the data. Chi Square test was done to determine significance of the relationship between independent and the dependent variables. Qualitative data was analyzed using content analysis, Data presentation was done using tables and figures.

VII. RESEARCH FINDINGS AND DISCUSSION

The study sought to know whether respondents sometimes change the project scope/requirements during implementation of their projects. 90.5% of the respondents indicated they do while 9.5% indicated otherwise. This implies that project scope changes do happen especially during implementation of projects and thus requirements, procedures, limit time and cost that were agreed upon in the project planning and design may be found as not leading to intended results or as not enough and changes will be proposed. Therefore, proper management and control of the changes is paramount to reduce the level of negative impact that may occur both for the cost and schedule. This was concurred with by the interviewees and document analysis done by the researcher where findings indicate that changes in project scope are likely to take place within the implementation phase because it is necessary for all projects to be adapted to the reality of environment in which they are being implemented in. Respondents added that project scope changes do happen because most of the time there are things that will not be seen in the phase of project initiation when defining the project scope or things that will change after defining the project scope. When such things happen, the project will have to incorporate them in the scope which provokes changes. This shows that project scope changes happen during implementation phase which brings the need of managing it properly to make the project achieve its success.

The research sought to find out the reasons leading to the decision of changing the project scope even though it was studied and agreed upon during the project initiation phase. Project scope changes were caused by error in defining project scope at 38.0%, beneficiaries see the outcome and wants changes at 32.0% and a new regulation at 30.0%. Interviewees opined that construction project scope changes do happen because project implementation phase brings forth experience of some assumptions of field such as stakeholder requirement, policy and new regulations, adjusting to climate changes and others which were not planned during project design phase. Any challenge that is encountered should be taken into consideration for the project has to meet its initial objectives. If this consideration indicates that project scope change is a better way to success, then there should start the process to analyze in which ways the scope will be changed. Proposal and analysis of construction project scope changes is done in an assessment to perceive if it will give a better way to the achievement of construction project objectives. Since project scope change is likely to happen during project

implementation, there is need to identify what could be its causes for the project team to figure out what to be done. Management of the new construction project scope in a way that does not lead to any other change is achieved by project managers having known the reasons of project scope changes which clearly demonstrates the aspect of risk cyclic nature.

The study sought to know the level of agreement on ways in which respondents use to manage project scope change process during implementation of their projects. 60.3% of the respondents indicated they fill a scope change request, 68.3% document and justify reason for scope change while 46.0% review and approve the scope change request. This implies that project scope change is a process that does happen especially during implementation of projects and thus prudent management of project scope change process is key for success of the project. This finding was concurred with by the interviewees and document analysis done which stated that in documenting and justifying reasons for scope change, donors discuss concept note presented to them, which explains clearly the reasons for the change. Based on project progress, the concept note gives details on how the current situation is likely not to lead to the expected outcome/impact. The concept note expresses challenges that were met in the implementation and proposes change to the facts observed in the environment.

The risk on project scope changes influence the performance of construction projects at 81.0% on project schedule/time, 79.4% on project cost and at 73.0% on project outcome quality as per the respondents strongly agree rating level. This implies that project scope changes has an influence on the project performance and thus needs to be managed. Changing the project scope was observed in this research that it goes with changes in other determinants of project management. The interviewees also concurred with this observation as witnessed during the interview and also document analysis done proved that project scope change has a lot of influence on the performance of projects. The findings from interview indicate that when there is need to adjust the project activities to reality of environment, it will bring change to time because activities might be added or changed to the ones that have different time compared to the baseline time. In this case thus cost is likely to change, but respondents emphasized on the fact that project implementers must look for possible ways of not increasing the cost because it would not be easy to get additional funds. Participants of interview added that project implementers will go through the process of changing project activities when there is hope that those changes will have additional elements on the product quality. The process of construction project scope change is carried out when evaluation of the project progress and indicators of not having good quality outcome has been done which means that continuing with initial activities are leading to unexpected quality of outcome. This is in agreement with Gichunge (2000) who also found that most serious source of cost and time risks in building projects during the construction period is ‘extra work’ (technically termed as variations), which normally occurs in 73.50% of the building projects. From the findings, it shows that respondents strongly agree that change in project activities has great influence on the project schedule. This implies that if project activities are well monitored and controlled, project schedule will be well controlled and the negative impact it may have on construction projects will be reduced if not eliminated.

Table 1: Change in project schedule/time is affected by change in project activities * Change in project activities results to change in project schedule/time

| | | | Change in project activities results to change in project schedule/time | | | Total |
|---|----------------|--|---|-------|----------------|--------|
| | | | Neutral | Agree | Strongly Agree | |
| Change in project schedule/time is affected by change in project activities | Disagree | Count | 1 | 0 | 0 | 1 |
| | | % within Change in project schedule/time is affected by change in project activities | 100.0% | 0.0% | 0.0% | 100.0% |
| | Neutral | Count | 2 | 2 | 0 | 4 |
| | | % within Change in project schedule/time is affected by change in project activities | 50.0% | 50.0% | 0.0% | 100.0% |
| | Agree | Count | 0 | 7 | 6 | 13 |
| | | % within Change in project schedule/time is affected by change in project activities | 0.0% | 53.8% | 46.2% | 100.0% |
| | Strongly Agree | Count | 0 | 0 | 45 | 45 |
| | | % within Change in project schedule/time is affected by change in project activities | 0.0% | 0.0% | 100.0% | 100.0% |
| Total | | Count | 3 | 9 | 51 | 63 |
| | | % within Change in project schedule/time is affected by change in project activities | 4.8% | 14.3% | 81.0% | 100.0% |

A chi-square test done on the findings to test evidence of significance resulted to a Pearson Chi-Square of 71.394 with 6 degrees of freedom. This shows that there is great evidence in that change in project activities results to change in project schedule/time. Respondents were in agreement that risk management in project scope changes influence performance of construction projects at 84.1% while 15.9% were of a contrary opinion. This is due to the fact that risks are increased whenever project scope changes and thus management of risks ensures that risks are well mitigated and risk impact is reduced if not eliminated. The study sought to know in which other ways does project scope changes influence performance of construction projects. Respondents were in agreement that project scope change influences the achievement of the desired outcome at 82.5% with a mean of 4.78 and standard deviation of 0.522, meet the need of the beneficiaries at 76.2% with a mean of 4.65 and standard deviation of 0.765 and satisfy quality expectations at 57.1% with a mean of 4.35 and a standard deviation of 0.936. In the interview respondents opined that changing the project scope affects the project product positively. This implies that adjustments of the project scope are an important element for project success.

While changing the initial definition of the project scope, project team is likely to experience different types of challenges. Increased risks was a challenge encountered at 95.2%, reorganizing the project budget occurs at 87.3% while managing increased work in a short time is encountered at 60.3%. This observation was affirmed by the interview respondents who were of the same opinion that there are increased risks, the project budget has to be reorganized to factor in the new changes and the project team is forced to manage increased work in a short time. This finding is in agreement with Fageha and Aibinu (2013) in their study that also found that project scope changes leads to increased risks that requires effective management to avoid project failure. From the findings, having minimum project scope changes' requests, ensuring that a contingency fund is in place in case of project scope changes and ensuring thorough consultation with all stakeholders are some of the ways for improving the process of project scope change risk management. The respondents for interview said that some time proposition to change will come before doing an evaluation. It was observed that construction project implementers will avoid carrying out the project scope change process severally if decision is based on external evaluation that helps in which way the scope should be changed during the project lifecycle. Interviewees added that some time scope could be changed without implications of beneficiaries' wishes and propositions and then later the implementers will find out that there are unconsidered needs for beneficiaries. In this case, the process of project scope change will be reviewed again and changes will be done once again.

The study sought to know how inadequate allocation of construction project funds influences performance. Failure to allocate adequate project funds influences the outcome of construction projects at 87.3% very great extent, 9.5% great extent. This implies that availability of funds is very important if success of project implementation is to be achieved. This is because funds availability ensures acquisition of resources to accomplish the project activities and achieve the anticipated deliverables on schedule and within budget. The findings from interview show that when there is inadequate allocation of funds, the outcome of the project in terms of performance is affected in that acquisition of resources (human, equipment and materials) are delayed thus affecting duration of the project. On the amount allocated to fund total costs for implementation of projects successfully, 84.1% said yes while 15.9% were of the no opinion. Interviewees agreed with this finding in that though most of the milestones had been achieved without requesting for additional funding, some had to be accomplished with additional funding which had been justified and approved. The study sought to know how long project approval budget procedure risk during implementation phase influences performance of construction projects. Long project approval budget procedure risk during implementation phase influences performance of construction projects at 90.5% great extent, 4.7% very great extent, 3.2% moderate extent and 1.6% little extent respectively. This implies that procedures for budget approval and funding processes needs to be clear and adequate to ensure that they do not become a hindrance to success of a project in terms of cost and schedule. This was similarly echoed by the interviewees whose findings are that procedures needs to be adequate for ensuring that project funds are available on time for implementation of projects. This is also affirmed by document analysis findings that showed that delays could occur due to long project budget approval procedures that results to project delays in terms of schedule leading to cost overrun. This agrees with studies done by Elinwa and Joshua (2001) whose findings were that long project budget approval procedures causes delay on projects' schedule leading to schedule and cost overruns.

The study sought to know the extent to which the respondents agreed with the influence which project funding have on performance of construction projects. Delays in disbursement of funds by financiers lead to cost and schedule overruns at 84.1%, timely release of project finances in required amounts promote project success at 81.0%, contractual claims by contractors increases project budget and can lead to project delays and cost overruns at 76.2%, lack of transparency and

accountability in management of project funds lead to project failure at 60.3% and poor estimation of budget increases project costs at 49.2% in level of strongly agreed whereas inappropriate project environment increases project costs by 57.1% in level of agreed. Findings show that delays in disbursement of funds by financiers lead to cost and schedule overruns with a mean of 4.79 and least standard deviation of 0.513 implying that delays in disbursement of funds may lead to project failure. Interview findings also indicate that delays in disbursement of funds by financiers lead to cost and schedule overruns since all resources are to be acquired using the funds availed to the project team as per the baseline budget. Timely and effective disbursement of project funds promote project success since project activities can be accomplished within the duration agreed and deliverables or milestones can be achieved within the time stipulated. Document analysis findings affirm the same observation since where funds were released on time, mobilisation of resources was achieved in time and milestones accomplished without requests for increase of project time. This agrees with Mwangi (2015) study on the effect of budget on project success. From the findings, it shows that respondents strongly agree that delays in disbursement of funds by financiers lead to cost and schedule overruns. This implies that if disbursement of construction project funds is not well managed as a risk, it may lead to failure of construction project or delays may occur in terms of cost and time thus having a negative impact on the performance of a project. A chi-square test done on the findings to test the evidence of significance resulted to a Pearson Chi-Square of 68.362 with 6 degrees of freedom. This shows that there is significant evidence in that delays in disbursement of funds by financiers lead to cost and schedule overruns of construction projects.

Respondents strongly agreed that poor estimation of budget results to change in project schedule/time at 60.3% whereas delay in disbursement of project funds results to change in project outcome quality at 39.7% strongly agreed. This implies that a lot of accuracy is required when estimating the budget to ensure that project schedule is not affected. Findings from the interviewees agree that accurate estimation of resources results to almost very accurate project budget that when approved by the financiers becomes the baseline budget. This calls for experience in project budgeting and use of the correct techniques so that one can have a budget that may be adequate for the project at hand. Through document analysis, it was observed that the baseline budget for the this project was an aggregation of the various costs for the activities and work packages that results to the project budget and some project milestones that had been accomplished had a negative cost variance and also schedule variance. The research sought to know how risk management in availability of project funds influences performance of projects. Risk management in availability of project funds influences performance of construction projects at 93.7%. This is due to scarcity of funds leading to performance of construction projects being compromised. This finding agrees with Olima (1999) whose study on problems of project implementation: a post-mortem study of Thika Dam project, Kenya also found that availability of project funds has a greater influence on its performance. The research sought to know in which other ways process of risk management on availability of project funds may be improved. 68.3% of the respondents suggested that there should be a contingency fund to cater for any risks that may arise during implementation while 19.0% suggested that budgeting should be enhanced, and 12.7% suggested that the project team should be well trained on project cost control measures.

The study sought to know the consequences of time as a performance indicator. From the findings, increasing project time makes the entire project cost to increase as indicated by 42.9% of the respondents, 22.2% of respondents mentioned that increasing project time leads to increase of needed labor, 20.6% of respondents said that when project time is increased, materials to be used will also be increased in quantity and 14.3% of respondents said that time increase leads to increase in quality of the product/service of the project. Findings from the interviewees show that when time of project is increased, it will help the project team to adjust project activities when necessary and help the project to deliver as per the requirements. Respondents added that most of the time the project time will be increased when the project team gives a request, though it is based on a thorough evaluation before it is approved and change effected. It was observed that project time is probable to be increased and not reduced as per the experience of the respondents. Completing the project with initial baseline schedule is one indicator of efficiency and completing the project before or after agreed time puts in question the success of the project. To ensure that efficiency of construction projects during project implementation phase is not affected, changes on time have to be managed properly. Findings show that influence of project time change on project performance has a mean of 2.30 and standard deviation of 0.961 implying that it has a great influence on performance of construction projects.

Respondents strongly agreed that change in project cost has an effect of 84.1% on project activities in a way that there could be lack of quality resources or services in case the cost of the project is reduced, 65.1% said that productivity/quality of product delivered can be increased where project cost is increased due to quality resources, 79.4%

said that cost change may facilitate the project implementers to be able to adopt advanced technology in achieving the objectives and 69.8% said that cost change may lead to the beneficiaries/client satisfaction by getting quality product/service. Findings also show that lack of quality resources/services with a mean of 4.60 and least standard deviation of 0.513 implying that if the project team does not adhere to the project cost as per the agreed baseline, this may lead to construction projects' cost overrun or failure. The interviewees said that when the cost of project is increased, this gives the opportunity to pull up the quality of product/service by using quality materials/services and offers an opportunity of adopting advanced technology. This leads to beneficiaries' satisfaction because of good quality product/service. When the project cost is low, project implementers tend to look for cheap services/resources which are likely to be of low quality and as result the project will deliver low quality product/service.

The research sought to know the challenges encountered by the project team while managing project cost and schedule. Findings shows that 30.1% are challenges involving re-organising the project budget, 27.0% involves adjustments of project activities and duration, 17.5% are increased risks, 11.1% involves sourcing for further resources, 9.5% are challenges on managing increased work in a short time, while 4.8% are on re-organising the project manpower requirements. This implies that there are a variety of challenges that are encountered during the implementation of projects and much involves the project budget. In the interview, respondents agreed with this finding in that while managing the project cost and time, a lot of effort is geared towards ensuring that the changes on any of the project components does not have a negative impact on the baseline budget that had been agreed and incase it may have, approval by the donor must be sought before incurring the cost. This was also confirmed by document analysis done as most of the variations were noted in project cost and time though there were documents supporting the variations which had been approved before the variations. It was also observed that a few of the changes requested by the project team were also rejected based on the achievement of the project objectives.

Respondents strongly agreed that project cost and schedule are affected by poor estimation of budget at 96.8%, change in project budget is affected by change in project activities at 87.3%, change in project outcome quality is affected by change in project activities at 76.2%, project delays and cost overruns are as a result of contractual claims by contractors while change in project schedule/time is affected by change in project activities at 71.4% level of agreement. This implies that project budget being an aggregation of various resources and duration required to accomplish a project, if not well done with accuracy and past experience on project costing will have a great effect on the performance of the project. Findings also show that project cost and schedule are affected by poor estimation of budget with a mean of 4.95 and least standard deviation of 0.280. This implies that poor estimation of budget has a lot of influence on the performance of construction projects during implementation phase as it affects the project cost and schedule thus it requires a lot of diligence when estimating the project budget. These findings are in agreement with the observations from the interview respondents who also concurred that project budgeting plays a major role in the success or failure of a project. These findings also agree with Ahsan and Gunawan (2010) findings on their study that identified most late projects experience unusual cost change and schedule variation due to poor estimation on budgets and disbursement of project funds.

VIII. CONCLUSIONS AND RECOMMENDATIONS

There was statistically significant evidence on the relationship between independent variables and performance of construction projects, implying that there is significant influence on performance by the independent variables. However, this research identified ineffective level of risk management practices since majority of the practices were informal and most of the construction team members had not studied risk management or project management. Inadequate allocation of project funds influences the outcome of construction projects in terms of performance in that acquisition of resources are delayed thus affecting duration of the project.

It is recommended that sound, comprehensively structured and formal risk management practices during project implementation phase with the involvement of all construction professionals and end users are put in place. It is also recommended by this study that students and professionals undertaking construction related studies and construction projects to have risk management in their curriculum as an examinable subject and have qualified in risk management before being allowed to practice in the area of construction projects. This will be in an endeavour to entrench the culture of risk management in the construction industry for all professionals in Kenya and especially those in construction projects implementation and procurement departments of both private and government developers. Also procedures of budget approval and funding process needs to be clear and adequate to ensure that they do not become a hindrance to success of construction projects.

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