

Influence of Project Contracting On the Performance of ICT Projects in Kenya: A Case Study of Aviat Networks, Nairobi County

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Abstract: The general objective of this study was to investigate the influence of project contracting on the performance of ICT projects in Kenya. A case of study Aviat Networks, Nairobi County. This study was guided by the following specific objectives: to establish the influence of procurement procedures, client-contractor relationship, stakeholder support and service legal agreement on the performance of ICT projects in Kenya. This study was carried out through a descriptive research design. The target population comprised of 63 respondents comprising of 5 project managers and 58 project team members in Aviat Networks. Simple random sampling was used to select the project managers and the project team members. The sample size was 50 respondents comprising of 4 project managers and 46 project team members. The research instruments employed in the study were questionnaires for the project team members and interviews for the project managers. The study revealed that procurement procedures, client-contractor relationship, stakeholder support and service legal agreement had a positive and significant effect on performance of ICT projects in Kenya. The study concluded that the organization carry out comprehensive feasibility study and strategic assessments before contracting. Statement of needs is done before organization looks for the contractors and the need identification can positively and significantly influence performance of ICT projects in Kenya. stakeholder support is crucial in the performance of ICT projects as it highlights the effective management of relationships between a project and its key stakeholders in order to ensure project success. There is a clear communication established between the client and the contractor so as to improve the performance of ICT projects. A written, detailed description of the scope of the project, regular status updates etc is always done so as to ensure that there is an organized client-contractor interactions. The organization has structures and reporting lines that are well defined and implemented for contracting. The contracting agreements, regulatory controls, legal documents, standards and procedures are clearly specified and SLAs are not ambiguous and incoherent for contracting. This has positively and significantly influenced performance of ICT projects in Kenya. The study recommended that the organization should carry out need identification before contracting their roads project as it affects performance of the organization. This emanates from the fact that quite a number of the respondents disagreed that combination of pooled knowledge and technical capacities that allow an organization to be competitive in the marketplace is considered before contracting. There is need to understand stakeholder influence is a key ingredient of successful completion of ICT projects in Kenya. The organizations project managers should try to acknowledge concerns of all stakeholders and in a dialogue seek to reconcile conflicting interests, culminating in the effective performance of ICT projects. There should be a mutual understanding between the client and the contractor in the contracting relationship so as to handle both opportunities and threats. The organizations should have structures and reporting lines that are well defined and implemented for contracting. The contracting agreements, regulatory controls, legal documents, standards and procedures should be clearly specified not ambiguous and incoherent for contracting. This study suggested that further studies should be carried out on how project management practices influence performance of ICT projects in Kenya.

Keywords: Aviat Networks, ICT Projects, organized client-contractor interactions.

1. BACKGROUND OF THE STUDY

A project is a temporary and unique endeavour undertaken to deliver a result (Vidal et al., 2011). Liu et al (2012) suggest that in a project, work is typically divided into work packages which are contracted to different contractors. However, the number of contractors and the contract types are parameters which influence the project complexity. Crawford and Bryce (2013) observe that a project is only successful if it comes on schedule, on budget, it achieves the deliverables originally set for it and it is accepted and used by the clients for whom the project was intended.

According to Mobey and Parker (2012), to increase the chances of a project succeeding it is necessary for the organization to have an understanding of what are the critical success factors, to systematically and quantitatively assess these critical success factors, anticipating possible effects, and then choose appropriate methods of dealing with them. The manager's skills, competence of project team, quality of subcontractor services and top management support are Critical Success Factors (CSFs) of project management.

The development of ICT projects has increased in many organizations that ensure overall needs of customers in business requirements are fulfilled. However, many ICT projects failed to take off (Liu et al., 2012). Faridi and El Sayegh (2012) noted that a shortage of manpower skills, poor supervision and site management, unsuitable leadership, and equipment failure have all contributed to project development delays in the United Arab Emirates. Hanson et al (2003) studied the client dissatisfaction factors in South Africa's ICT industry and found poor workmanship and contractor incompetence to be the main factors affecting project performance, and thus contractor performance.

Clark (2009) contends that different people measure project success in different ways at different times. Keller (2008) found that the satisfaction of the key project stakeholders, including the customer, was the overriding measure of project success, with stakeholders being satisfied if their quality related criteria were met. Badenfelt (2011) suggests that tensions are frequent and serious in inter-organizational projects in which the contracting parties share uncertainty about many important changes that occur after the contract is signed and production begins.

Project performance can be investigated and evaluated using many performance indicators, expressed by factors such as time, cost, quality, client satisfaction, client changes, and health and safety (Cheung et al., 2011). Mono (2013) concludes that contractor's experience, contractor cash flow, site management, employer's ability to honour contractor's certificates on time, and adequacy of funding from external sources to be determinants of successful delivery of projects.

Completion of projects within schedule is a major contribution towards the competitive edge in organizations. This is based on the realization that the achievement of the targeted objectives is determined by the ability to deliver the targeted output within the stipulated time, (Stephen, 2014). Throughout the world, the business environment within which construction organizations operate continues to change rapidly. With increasing higher users' requirements, environmental awareness and limited resources on one side and high competition for construction business marketplace on the other side, contractors have to be capable of continuously improving their performance (Loring, 2007). A project is considered successful if the project is delivered on time, on schedule and acceptable quality. However, measuring project success is a complex task since success is tangible and can hardly be agreed upon (Clark, 2009).

In China, Ismail, Yusuwan (2010) indicate that a good working collaboration, an effective communication channel and team member involvement during the contracting are the top three most influential management-related factors towards the successful implementation of ICT projects. On the other hand, Luo et al (2015) argued that there is a lack of a quality-monitoring mechanism during the contracting process which presents a main quality risk that reduces the confidence among stakeholders as to the quality of projects.

Chan and Tam (2009) have examined the factors affecting the quality of building projects referring to Hong Kong ICT companies and suggested that management action by the project team is the most significant quality factor, followed by the effectiveness of the development team leader and the emphasis on quality by client. Jha and Iyer (2011) have conducted a study on critical factors influencing quality performance in ICT projects in India, and found project managers' competence and the support from top management to be the most critical factors affecting project quality.

Abbasnejad and Moud (2013) found that most projects in Iran suffered from delays, inflicting major damage on contractors, and that these damages were unbearable and deeply affected contractor performance, which has been found to vary among nations for a long time. Dissanayaka and Kumaraswamy (2013) found that time and cost performance factors were influenced by project team performance and the characteristics of the project and of client representations. Improved contractor performance leads to improved client satisfaction, reputation, and competitiveness. Contractor performance is connected to several defining factors involving time, money, cost, and labor power.

The relationship between clients and their consultants involves a price-based contractor selection process, as Tao and Kumaraswamy (2012) have found. However, choosing the lowest offer often leads to problems such as sub-standard quality, cost overruns, and delays, which can then lead to huge legal and economic problems between project partners. Clients and owners also affect project performance. Ahmed and Kangari (2011) argued that clients are frequently critical of contractors and that contractors logically tend to mind their own business within the terms of their contract. General project performance is affected by a number of project characteristics.

In Nigeria, Chan and Kumaraswamy (2012) remarked that effective communication and fast information transfer between managers and participants help to accelerate the performance of projects. Odeyinka and Yusif, (1997) as cited by Hussin and Omran (2011) state that in Nigeria, even out of ten projects surveyed suffered delays in their execution. Also cited by the same authors is Akinsola (1996) as observing that in Nigeria 5-10% of project pre-contract cost is based on contingency. This has been found inadequate which means extra financial commitments occasionally beyond the capacity of the owner. Clients are sometimes not prepared for this and so fund in terms of loans are sought to offset this additional costs.

Mbachu and Nkando (2007) established that quality and attitude to service is one of the key factors constraining successful project delivery in South Africa. While investigating the subject of project delays in South Africa, Olatunji (2010) observes that it is a phenomenon that can be attributed to the inability of the client/his representative and the project team to have a comprehensive view of project from inception to completion. They therefore advance the need to create awareness of the extent to which delays can adversely affect project delivery.

The performance of contractors in Zambia is apparently below expectation. It is uncommon to learn of local projects that have not been completed or significantly delayed. This poor performance of many local contractors has huge implications in terms of their competitiveness (Zulu & Chileshe, 2008). Zulu and Chileshe (2008) investigated contractor performance in Zambia and found it below expectations, arguing that nothing can be learned from local ongoing projects that have not been completed or have been delayed. They concluded that contractors' poor performance has huge implications on competitiveness.

Olawale and Sun (2010) indicate that most ICT projects especially ICT infrastructure in Kenya are exposed to extreme cost escalation menace to the extent that it calls not only for extra funding but also specialized expertise hence leading to technical and project managerial conflicts between project's parties. Adherence to cost estimates has been a major challenge and considered to be the biggest problem which hinders project's progress since it decreases the contractors' profit margin hence leading to huge losses leaving the project in a big trouble (Doloi, 2011).

A study conducted in energy sector on cost overruns in Kenya, problems associated with pioneer power projects and process plants revealed that seventy four percent of cost escalations was caused by poor coordination of projects activities and lack of change management control thus affecting adherence to cost estimates (Kagiri & Wainaina, 2009). The increasing complexity of infrastructure and the environment within which projects are constructed places greater demand on project managers to deliver projects on time, within the planned budget and with high quality (Enshasi et al, 2009).

In Kenya, the ICT sector is considered a key driver of economic growth and great efforts have been made over the last five years to ensure this is achieved (Gichoya, 2005). According to a 2014 annual joint report by Africa Development Bank (ADB), Organization for Economic Co-operation Development (OECD) and United Nations Development Programme (UNDP), Kenya's economic growth is expected to accelerate from around 5% in 2013 to a little under 6% in 2014 and 2015, driven by ICT as one of the key sectors. Kenya has been home to key innovative projects in the ICT sector. There are also a wide range of ICT Initiatives and projects ongoing in Kenya.

STATEMENT OF THE PROBLEM:

Contracting can yield substantial economic rewards provided certain criteria are met. However, large infrastructure projects suffer from significant under management of risk in practically all stages of the value chain and throughout the life cycle of a project as indicated by Kog and Loh (2012). Lever (2012) observes that the level of contracting in an organization affects management activities in one way or another and extensive contracting can lead to loss of internal controls in the organization. Contracting presents special risks and relying on third parties to perform some functions, decreases management's control over the operations and therefore requires management intensified oversight efforts. Compliance risk exists when products, services or system associated with third-party relationship are not in compliance with applicable laws, rules or regulations, or are not consistent with ethical standards and policies and procedures (Bresnen & Marshall, 2013).

Information and communications technology (ICT) is critical for organizations to operate effectively. Many ICT projects are designed to enable a service transformation objective. They are inherently difficult to plan and deliver. ICT-enabled projects have historically experienced significant cost overruns and time delays, generally on a greater scale and incidence than other types of projects. The project contracting process starts from the first engagement with a contractor through to the project's completion. There are practical implications of applying a staged project delivery approach that will affect contracts with contractors. As part of the business case for an ICT project, a detailed contracting strategy should be developed to provide a framework for negotiating contracts with contractors to support the individual project stages.

Stoica and Brouse (2013) states that due to the ICT project failure and its impact to the organization, researchers and practitioners are asked to specifically look at the history of how the project is carried out to find an effective approach and comprehensive to overcome this issue. Despite high standards of project management methodologies in ICT, most of the ICT projects have yet to show a good track record of success as of now. Stock and Lambert (2009) noted that contracting implementation comes with a lot of challenges. Based on his interviews and analysis, the number one problem in contracting implementations is a lack of understanding of post-contract processes and decision rights. The results are that services simply aren't performed, implementation activities get stalled, client stakeholders and service provider staff are both frustrated, and the entire schedule for achieving expected business benefits is delayed. Mutua (2012) noted that the first practice that draws universal consensus among contracting advisors is clarity of goals and objectives on the client side. Therefore, this study sought to investigate the influence of contracting on the performance of ICT projects in Kenya.

SPECIFIC OBJECTIVES:

This study was guided by the following specific objectives:

- i. To establish the influence of procurement procedures on the performance of ICT projects in Kenya
- ii. To examine the influence of client-contractor relationship on the performance of ICT projects in Kenya
- iii. To find out the influence of stakeholder support on the performance of ICT projects in Kenya
- iv. To identify the influence of service level agreements on the performance of ICT projects in Kenya

2. LITERATURE REVIEW

Resource Based View (RBV) Theory:

The resource-based perspective has an intra-organizational focus and argues that performance is a result of firm-specific resources and capabilities (Barney, 2001). The RBV isolates unique resources that are complex, intangible, and dynamic within a particular firm which can be utilized by the firm to gain and sustain competitive advantage. The bundles of resources that are distinctive to a firm give it an edge which other firms may not easily copy hence providing sustainability of the competitiveness (Barney, 2001).

This theory is relevant to the study because RBV suggests that effective project performance results are a consequence of firm-specific resources and capabilities that are costly to copy by other competitors. Therefore, in an organization's effort to achieve project goals, it is important to establish the resources owned by the company and how such resources can be tapped for the given organization's project performance.

Stakeholder theory:

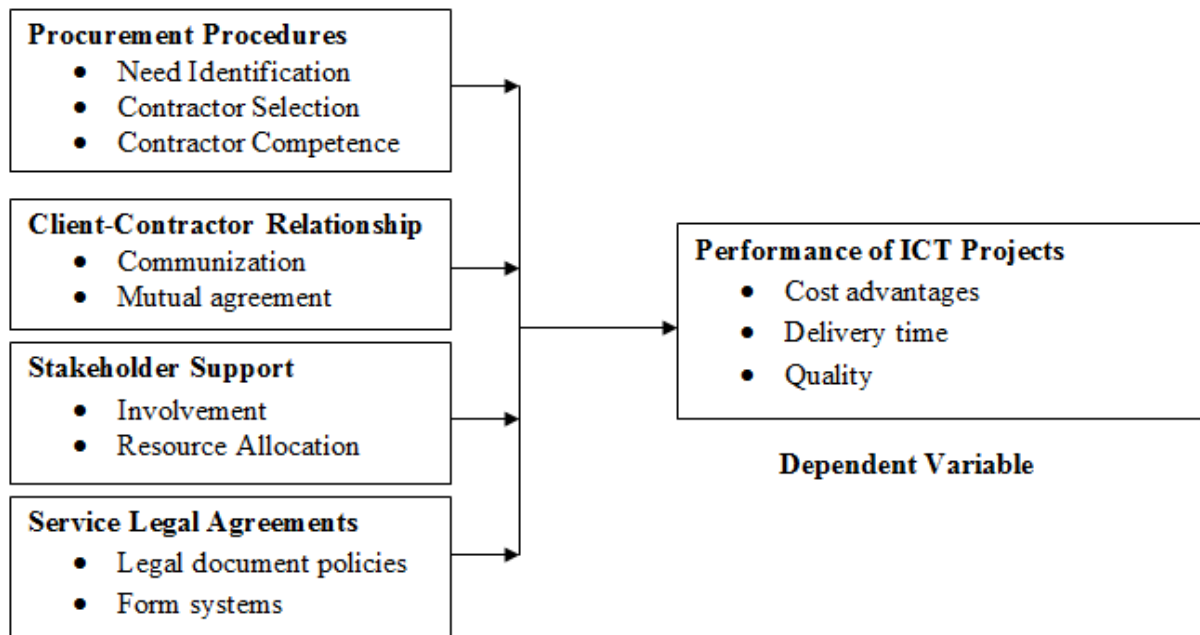
The basic idea of stakeholder theory is that organizations have relationships with many constituent groups and that it can engender and maintain the support of these groups by considering and balancing their relevant interests (Kirsi, 2010). Kirsi (2010) further noted four premises of the stakeholder theory that; corporations have relationships with many constituent groups (stakeholders) that affect or are affected by its decisions, the theory is also concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders, that the interests of all (legitimate) stakeholders have intrinsic value and not one set of interests is assumed to dominate others, and finally the theory focuses on managerial decision making. Based on the argument of instrument of power of this theory, a company using stakeholder approach will have increased organizational performance in terms of economics and other criteria (Hasan & Kamil, 2010).

Though, Blattberg (2004) criticized stakeholder theory for assuming that the interests of various stakeholders can be compromised or balanced against each other, the researcher did not propose any other alternative apart from recommending negotiation and dialogue for dealing with conflicts between stakeholder interests. Kirsi (2010) noted that

while having its origins in strategic management, stakeholder theory has been applied to a number of fields, presented and used in a number of ways that are quite distinct and involves very different methodologies, concepts, types of evidence and criteria of evaluation.

Lynda (2006) after examining stakeholder theory concluded that the support of key stakeholders was essential for project success and consequently the success of programs. In relation to the study the managers should on the one hand manage the corporation for the benefit of its stakeholders in order to ensure their rights and the participation in decision making and on the other hand the management must act as the stockholder’s agent to ensure the survival of the firm to safeguard the long term stakes of each group.

Conceptual Framework



3. RESEARCH METHODOLOGY

RESEARCH DESIGN:

This study was carried out through a descriptive research design. Descriptive research design is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Saunders et al., 2009). Mugenda and Mugenda (2003) notes that descriptive research includes surveys and fact finding enquiries and is applied where the study is using comparative variables in the field of study and the case at hand has no control over the variables and it can only be reported on what has happened or what is happening.

TARGET POPULATION:

Orodho (2002) defines target population as a large population from whom a sample population is selected. The target population comprised of 63 respondents comprising of 5 project managers and 58 project team members in Aviat Networks.

TABLE: TARGET POPULATION

Department	Population
Project Managers	5
Project Team Members	58
Total	63

Source: Human Resource Department (2017)

SAMPLE SIZE:

Kull (1984) noted that sampling is the process by which a relative small number of individual object or event is selected and analyzed in order to find out the surrounding about the entire population from which was selected using some systematic form. Yamane (1967) provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample size as shown below.

$$n = N/[1+N(e^2)]$$

Where n = Sample Size

N = Target Population

e = The Level of precision or margin of error at 5% (standard value of 0.05).

When this formula was applied to the above sample;

$$n = N/1+N(e^2) = 58/[1+N(0.052)] = 50$$

The table 3.2 shows sample size representing 79.4% of target population in which sampling technique was used to group the target population into homogeneous strata. The percentage of the sample size was as illustrated below;

Percentage of the sample size = (Sample Size/Target Population) * 100

$$= (50/63) * 100 = 79.4\%$$

TABLE : TARGET POPULATION

Department	Population	Sample Size
Project Managers	5 *0.794	4
Project Team Members	58 *0.794	46
Total	63	50

4. DATA ANALYSIS, PRESENTATION AND DISCUSSION

RESPONSE RATE:

The study targeted a sample size of 50 respondents comprising of 4 managers and 46 project team members and their response rate is shown in theTable

TABLE RESPONSE RATE

Category	Frequency	Percentage
Managers	4	100
Employees	42	91.3
Total	46	92.0

Source: Research Data (2017)

The results in Table 4.1 show that the managers were interviewed forming a response rate of 100% and out of 46 project team members, 42 of them returned their questionnaires forming a response rate of 91.3%. The overall response rate was 92.0%. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the overall response rate of 92.0% was excellent. The questionnaire return rate was high because the researcher ensured that the respondents had been sensitized prior to administration of the questionnaires.

BACKGROUND INFORMATION:

On the background information of the project team members, the study sought to establish the respondents' gender, highest level of education level, work experience and kinds of ICT projects are you familiar with.

GENDER:

The respondents were asked to indicate their gender to which they gave their responses as indicated in Figure

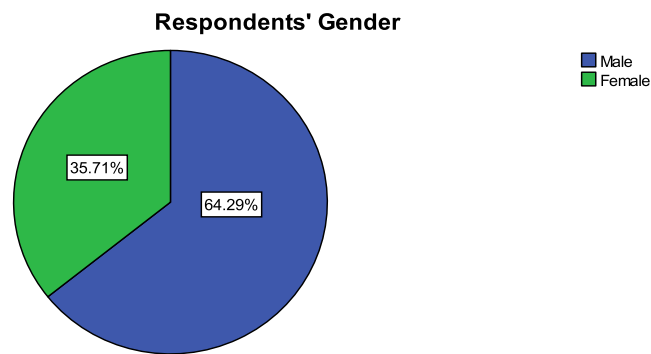


Figure : Respondents' Gender

SOURCE: RESEARCH DATA (2017)

The results in Figure 4.1 show that majority (64.29%) of the respondents was male and female respondents accounted for 35.71%. These findings shows that both genders were involved in this study and thus the findings of the study did not suffer from gender biasness.

LEVEL OF EDUCATION:

The respondents were asked to indicate their level of education to which they gave their responses as indicated in Table

Respondents' Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	9	21.4	21.4	21.4
	Post Graduate Diploma	3	7.1	7.1	28.6
	Bachelor's Degree	20	47.6	47.6	76.2
	Master's Degree	10	23.8	23.8	100.0
	Total	42	100.0	100.0	

Source: Research Data (2017)

The results in Table 4.2 show that majority (47.6%) of the respondents had attained a Bachelor's Degree level of education. This was followed by those who had Master's Degree (23.8%), Diploma (21.4%) and Post Graduate Diploma (7.1%). These results justify that the respondents were well educated which means that they were in a position to respond to research questions with ease.

ICT PROJECTS FAMILIAR TO RESPONDENTS:

Kinds of ICT projects respondents were familiar with					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	National Projects	17	40.5	40.5	40.5
	County Projects	6	14.3	14.3	54.8
	Both National Projects and County Projects	19	45.2	45.2	100.0
	Total	42	100.0	100.0	

Source: Research Data (2017)

Procurement Procedures and Project Performance

The first research objective sought to establish the influence of procurement procedures on the performance of ICT projects in Kenya. From the research findings, majority (90.5%) of the respondents as shown in figure 4.3 were of the opinion that procurement procedures influence the performance of ICT projects while 9.5% were on the contrary.

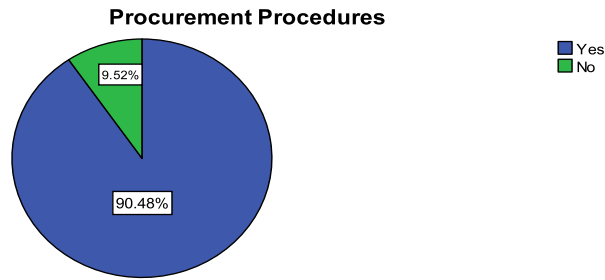


Figure: Procurement Procedures

Source: Research Data (2017)

The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the effects of procurement procedures on the performance of ICT projects in Kenya. Their responses are shown in table

Table : Procurement Procedures and Project Performance

Statement	M	Sd. Dev.
A comprehensive feasibility study is carried out before contracting	4.45	0.593
A strategic assessment is carried out before contracting	4.26	0.857
Statements of needs are done before contracting	3.40	1.563
Rigorous analysis is carried out to identify the best contractor	3.98	1.070
Once the contractor is selected, the organization enters a legal contract with the contractor	3.57	1.532
The organization ensures a clear demarcation between its core activities and the contracted ones	3.81	1.234
Contractor credibility is first sought before the organization enters a contract with the contractor	3.14	1.586

Key: M – Mean; Sd.Dev – Standard Deviation

Source: Research Data (2017)

The results in the Table show that majority of the respondents strongly agreed that a comprehensive feasibility study is carried out before contracting (M=4.45, Sd.Dev =0.593) and that a strategic assessment is carried out before contracting (M=4.26, Sd.Dev =0.857). These were followed by the statements that rigorous analysis is carried out to identify the best contractor (M=3.98, Sd.Dev =1.070), the organization ensures a clear demarcation between its core activities and the contracted ones (M=3.81, Sd.Dev =1.234), Once the contractor is selected, the organization enters a legal contract with the contractor (M=3.57, Sd.Dev =1.532), statements of needs are done before contracting (M=3.40, Sd.Dev =1.563) and contractor credibility is first sought before the organization enters a contract with the contractor (M=3.14, Sd.Dev =1.586).

From the interviews, it was established from the project managers that project identification starts from an understanding of the organizations mandate and objectives. It involves identifying environmental problems to be addressed and the needs and interests of possible beneficiaries and stakeholders. An alliance is formed between key project participants, including the organization staff and contractor. Contractor proposals are always evaluated and a decision is made based on either a cost or best value basis. Contractor competence is based on contractor’s credibility, expertise and reliability before they enter into any legal agreement.

These findings are in line with the findings of Randall (2013) who posits that successful contracting requires identification of a strong need for contracting. Organizations undergoing rapid change due to changing internal and external environments are likely to benefit if they embrace contracting as an operational strategy to reduce operation costs. Randall

(2013) adds that companies facing significant capital and headcount constraints are also likely to benefit by contracting expensive assets and personnel services.

According to Wang (2009) the output of the requirements at the analysis stage will most likely determine the output of the entire development process. They indicate that the origination and initiation phase, in which major decisions are made, such as decisions on the project’s objectives and planning the project’s execution, has the most influence on the project’s success. The issue is much more serious when the kind of activities that should be undertaken depends on the outcome of earlier activities. It is therefore important to identify parameters (performance indicators) for benchmarking projects at the project selection phase in order to achieve good project performance as indicated by Kagioglou et al (2011).

Barthelemy (2009) observes that right partners will eventually lead to closer ties and relationships. Elmuti (2011) further emphasizes the importance to get the right people involved in managing contracting efforts and add that adequate training, infrastructure and facilities are essential. Therefore, there is a need to carry out a rigorous contractor selection process to ensure the right candidate is awarded the contract for the provision of the service or delivery of the project.

Client-Contractor Relationship and Project Performance:

The second research objective sought to establish the influence of client-contractor relationship on the performance of ICT projects in Kenya. From the research findings, majority (88.1%) of the respondents as shown in figure 4.4 were of the opinion that client-contractor relationship influence the performance of ICT projects while 11.9% disagreed.

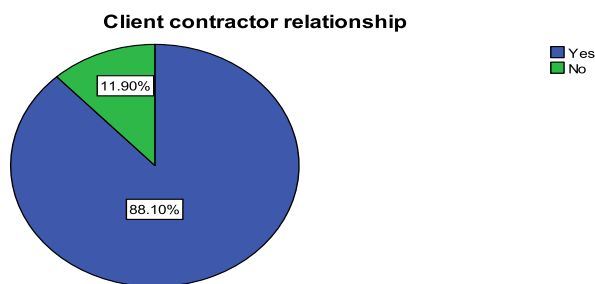


Figure : Client-Contractor Relationship

Source: Research Data (2017)

The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the effects of client-contractor relationship on the performance of ICT projects in Kenya. Their responses are shown in table 4.6.

Table : Client-Contractor Relationship and Project Performance

Statement	M	Sd.Dev
Clear communication between client and contractor is ensured to make sure that there is a clear understanding of user expectations in regards to quality right from the start	3.19	1.685
There is an organized relationship between a contractor and the client that include a written, detailed description of the scope of the project, regular status updates etc.	3.60	1.308
The relationship between the contractor and the client is governed by the contract itself	4.02	1.538
Contractors provide clients with skills and expertise at the outset of a project	3.17	1.576
There is provision of clear communication channels, combined with sharing the project timeline and regular updates in order to enhance collaboration and teamwork	4.07	0.894

Key: M – Mean; Sd.Dev – Standard Deviation

Source: Research Data (2017)

The results in Table 4.5 show that majority of the respondents strongly agreed there is provision of clear communication channels, combined with sharing the project timeline and regular updates in order to enhance collaboration and teamwork (M=4.07, Sd.Dev=1.538) and that the relationship between the contractor and the client is governed by the contract itself (M=4.02, Sd.Dev=1.538). These were followed by the statements that there is an organized relationship between a contractor and the client that include a written, detailed description of the scope of the project, regular status updates etc (M=3.60, Sd.Dev=1.308), clear communication between client and contractor is ensured to make sure that there is a clear understanding of user expectations in regards to quality right from the start (M=3.19, Sd.Dev=1.685) and contractors provide clients with skills and expertise at the outset of a project (M=3.17, Sd.Dev=1.576).

From the interviews, it was established from the project managers that client and the contractor have to interact frequently during the contract period for communication and joint problem solving, and this limits the degree of conflict possible. Also, the client is strongly dependent on the good will of the contractor both to deliver work of good workmanship, and to handle unforeseen circumstances in a co-operative way.

These findings concur with the findings of Georgy et al (2009) who argue that the relationship between client and contractor cannot be taken for granted. Even where the parties have established a close business relationship on previous projects, it is still important to build the relationship for each specific project. The relationship must be founded on a set of strong, mutually held core values and guiding principles. The relationship is supported by a contractual arrangement formalising the risk-sharing arrangements. This relationship is founded on the principle that there is a mutual benefit to the client and the contractor to deliver the project at the lowest cost - when costs increase both the contractor and the client are worse off (Georgy et al., 2009).

For an organization and contractor in a contracting relationship to handle both opportunities and threats, they need a mutual understanding of the stage of their relationship (Gottschalk & Solli-Saether, 2012). If the contracting arrangement is to be successful, it needs to be managed with care, attention to detail, vision about what might be achieved, close monitoring of financial issues and sensitivity to the needs of different stakeholders (Akomode, Lees & Irgens, 2012).

4.1 Stakeholder Support and Project Performance:

The third research objective sought to establish the influence of stakeholder support on the performance of ICT projects in Kenya. From the research findings, majority (95.2%) of the respondents as shown in figure 4.5 were of the opinion that stakeholder support influence the performance of ICT projects while 4.8% disagreed.

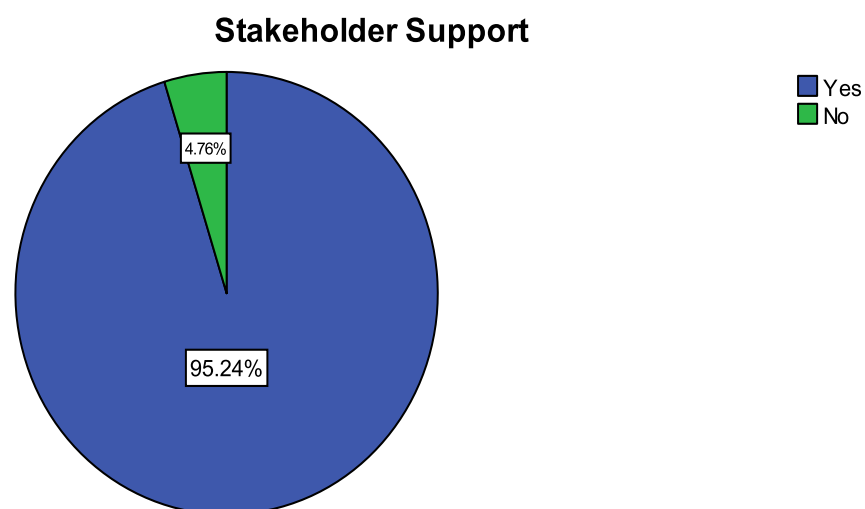


Figure: Stakeholder Support

Source: Research Data (2017)

The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the effects of stakeholder support on the performance of ICT projects in Kenya. Their responses are shown in table 4.7.

Table : Stakeholder Support and Project Performance

Statement	M	Sd.Dev
Stakeholders are identified early and their input used to shape the project to ensure their support and improve the effectiveness and efficiency of the project	4.29	0.742
Project team communicate with stakeholders early and frequently to ensure that stakeholders fully understand the project processes, and the benefits to the organization	3.83	1.248
Stakeholder analysis is done during the initiating stage which greatly influence the development of an effective project strategy and increase the chances for a successful project outcome	4.40	0.734
Problem analysis is done to understand what support the project needs from them	4.10	1.008

Key: M – Mean; Sd.Dev – Standard Deviation

Source: Research Data (2017)

The results in Table 4.6 show that majority of the respondents strongly agreed that stakeholder analysis is done during the initiating stage which greatly influence the development of an effective project strategy and increase the chances for a successful project outcome (M=4.40, Sd.Dev=0.734) and that stakeholders are identified early and their input used to shape the project to ensure their support and improve the effectiveness and efficiency of the project (M=4.29, Sd.Dev=0.742). These were followed by the statements that problem analysis is done to understand what support the project needs from them (M=4.10, Sd.Dev=1.008) and that project team communicate with stakeholders early and frequently to ensure that stakeholders fully understand the project processes, and the benefits to the organization (M=3.83, Sd.Dev=1.248).

From the interviews, it was established from the project managers that stakeholder support in ICT projects is generally considered an important mechanism for improving project quality and ensuring successful project implementation. Stakeholder support is crucial in supporting decision making, to share knowledge, to reduce the level of subjectivity and to remain transparent. Stakeholder support also facilitates understanding of stakeholders' expectations and finally monitors if the project is done effectively.

These findings agree with that findings of Nobeoka and Cusumano (2009) who observe that stakeholder involvement impact of different project goals on software project planning and resource allocation decision and, in turn, on project performance. Harold (2013) argues that stakeholder involvement in planning involves stakeholder Involvement in determining how to plan, developing the scope statement, selecting the planning team, identifying deliverables and creating the work breakdown structure, identifying the activities needed to complete those deliverables and networking the activities in their logical sequence, estimating the resource requirements for the activities, estimating time and cost for activities, developing the schedule, developing the budget, risk planning; gaining formal approval to begin work (Rosario, 2010).

According to Duncan (2012), Stakeholder involvement in project implementation is required to transform the planned objectives and policies of a project into well-organized activities, allocation of resources, efficient utilization of these resources, and the efficient and effective conduct of specific tasks through a well-coordinated people and the resources to achieve the project goals. Stakeholder Involvement is critical to the success of every project in every organization. Mitchell, Agle and Wood (2010) suggest that power, legitimacy and urgency are key stakeholder characteristics. The number and nature of stakeholders will vary with the life of the project; it would therefore make sense to carry out the review of identification throughout the project.

4.2 Service Level Agreement and Project Performance:

The fourth research objective sought to establish the influence of service level agreements on the performance of ICT projects in Kenya. From the research findings, majority (90.5%) of the respondents as shown in figure 4.6 were of the opinion that service level agreement influence the performance of ICT projects while 9.5% disagreed.

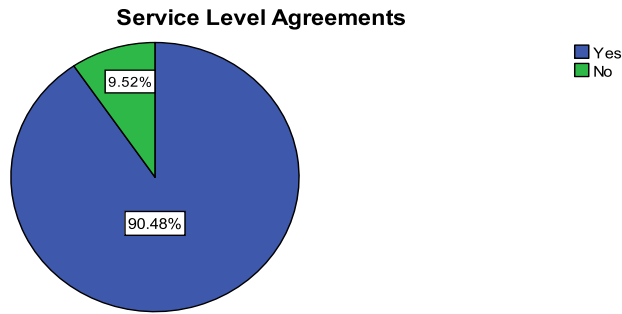


Figure : Service Level Agreement

Source: Research Data (2017)

The respondents were further given a list of statements on a five-point likert scale to indicate their extent to which they concur regarding the effects of service level agreement on the performance of ICT projects in Kenya. Their responses are shown in table 4.8.

Table : Service Level Agreement and Project Performance

Statement	M	Sd.Dev
There is a well-defined and implemented structures and reporting lines for Contracting	3.81	0.742
Legal agreement regulatory controls are clearly specified	4.33	1.003
Standards and procedures are clearly specified	4.00	1.288
SLAs are not ambiguous and incoherent for contracting	3.74	1.432

Key: M – Mean; Sd.Dev – Standard Deviation

Source: Research Data (2017)

The results in Table 4.7 shows that majority of the respondents strongly agreed that legal agreement regulatory controls are clearly specified (M=4.33, Sd.Dev=0.742) and that standards and procedures are clearly specified (M=4.00, Sd.Dev=1.288). These were followed by the statements that there is a well-defined and implemented structures and reporting lines for contracting (M=3.81, Sd.Dev=0.742) and SLAs are not ambiguous and incoherent for contracting (M=3.74, Sd.Dev=1.432).

From the interviews, it was established from the project managers that SLAs are put in place detailing process maps, responsibilities and implementation of key performance indicators. Structures and reporting lines are defined and implemented. Besides, in a contracting agreement, regulatory controls such as legal documents policies, form systems, standards and procedures are ensured to create relationship between the organization and the contractor and specification of boundaries.

These findings are in line with the findings of Power (2006) assert that the SLAs should be clearly stated, easy to understand, easy to measure and based on firm's thorough benchmarking analysis. A common mistake made by organizations is to have ambiguous and incoherent SLAs that cannot be measured objectively. This makes them very difficult to implement and hence just useless. It is always a good idea to state the exact methods of computation for measuring the SLA so as to be clear. For instance, if an organization has an SLA that relates to the downtime of a system, it should be able to precisely state how it expects this downtime to be calculated per month, per week or per day. The point is that these specifics need to be clearly stated so that they can be measured and evaluated (Nitithamyong & Skibniewski, 2011).

Service level agreements (SLAs) are put in place detailing process maps, responsibilities and implementation of key performance indicators. Structures and reporting lines are defined and implemented. Besides, in a contracting agreement,

regulatory controls such as legal documents policies, form systems, standards and procedures may establish the relationship between the two parties and specify boundaries (Teng & Jaramillo, 2005) yet they represent only incomplete contracting and hence cannot be exhaustive. Interpersonal and informal infrastructures are required to solve ambiguities and make the outcome more predictable. Social or informal control is based on norms, shared values, internalization and beliefs (Eisenhardt, 2010).

Project Performance:

On the measurement of project performance of ICT projects in Kenya due to project contracting as a dependent variable, the respondents were given a list of statements on a five-point likert scale to indicate their extent to which they concur. This is shown in Table 4.9.

Table : Project Performance

Statement	M	Sd.Dev
It leads to improved quality of services	4.74	0.445
There is timely delivery of services	4.19	1.215
Decline in cost between the principal and agent	3.38	1.413
Access to skilled resources	3.71	1.384

Key: M – Mean; Sd.Dev – Standard Deviation

Source: Research Data (2017)

The results in Table 4.8 show that there was high improvement of quality of services in project contracting on ICT project performance as indicated by a mean of 4.74. This varied significantly as indicated by a standard deviation of 0.445. It was also established that there was high timely delivery of services on project contracting on project performance as indicated by a mean of 4.19. This varied significantly as indicated by a standard deviation of 1.215. The results in Table 4.8 also indicated that there was a moderate decline in cost between the principal (M=3.38, Sd.Dev=1.413) and agent and access to skilled resources (M=3.71, Sd.Dev=1.384).

Completion of projects within schedule is a major contribution towards the competitive edge in organizations. This is based on the realization that the achievement of the targeted objectives is determined by the ability to deliver the targeted output within the stipulated time, (Stephen, 2014). Throughout the world, the business environment within which construction organizations operate continues to change rapidly. With increasing higher users’ requirements, environmental awareness and limited resources on one side and high competition for construction business marketplace on the other side, contractors have to be capable of continuously improving their performance (Loring, 2007). A project is considered successful if the project is delivered on time, on schedule and acceptable quality. However, measuring project success is a complex task since success is tangible and can hardly be agreed upon (Clark, 2009).

Regression Analysis:

The researcher conducted a multiple regression analysis so as to test relationship among independent variables and dependent variable. The researcher applied the statistical package for social sciences (SPSS) statistics 17.0 to code, enter and compute the measurements of the multiple regressions for the study.

Table : Results of Multiple Regressions

Model	R	R Square	Adjusted R Square	St. Error of the Estimate
1	0.622	0.756	0.678	0.598

Source: Research data (2017)

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in Table 4.10 the value of adjusted r squared was 0.678, an indication that there was variation of 67.8% on performance of ICT projects in Kenya due to changes in procurement procedures, client-

contractor relationship, stakeholder support and service level agreements at 95% confidence interval. This shows that 67.8% changes in performance of ICT project could be accounted to the independent variables under study.

R is the correlation coefficient which shows the relationship between the study variables and from the findings shown in the Table 4.10 is notable that there exists strong positive relationship between the study variables as shown by 0.756. Additionally, this therefore means that factors not studied in this research contribute 24.4% of performance of ICT projects in Kenya and further studies should be conducted to investigate the other factors (24.4%) that affect performance ICT projects in Kenya.

Table: Analysis of Variance (ANOVA)

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.454	4	4.7437	11.759	0.002 ^b
	Residual	25.13	38	0.4520		
	Total	28.584	42			

Source: Research Data (2017)

From the ANOVA statics in Table 4, the study established the regression model had a significance level of 0.002^b which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (11.759>4.7437) an indication that procurement procedures, client-contractor relationship, stakeholder support and service level agreements all affects performance of ICT projects in Kenya

Table: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.756	0.072		.141	.005
Procurement Procedures	0.703	0.083	2.241	.567	.002
Client-contractor Relationship	0.661	0.041	4.493	.374	.003
Stakeholder Support	0.793	0.037	1.106	.643	.001
Service Legal Agreement	0.676	0.010	3.068	.243	.004

Source: Research data (2017)

The finding revealed that holding independent variables constant (procurement procedures, client-contractor relationship, stakeholder support and service level agreements) to a constant zero, performance of ICT projects in Kenya would be at 0.756, a unit increase in procurement procedures would lead to increase in performance of ICT projects in Kenya by a factor of 0.703, a unit increase in client-contractor relationship would lead to increase performance of ICT projects in Kenya by factor of 0.661, a unit increase in stakeholder support would lead to increase in performance of ICT projects in Kenya by a factor of 0.793 and a unit increase in service level agreements would lead to increase in performance of ICT projects in Kenya by a factor of 0.676.

From the data in Table 4.10, it was established that regression equation was $Y = 0.756 + 0.703X_1 + 0.661X_2 + 0.793X_3 + 0.676X_4$. Therefore, performance of ICT projects in Kenya = 0.756 + (0.703 x procurement procedures) + (0.661 x client-contractor relationship) + (0.793 x stakeholder support) + (0.676 x service level agreements).

From the results of this study in Table 4.10, stakeholder support contributed more (0.793) to the performance of ICT projects in kenya. At 5% level of significance, procurement procedures had a p-value of 0.002; client-contractor relationship had a p-value of 0.003; stakeholder support had a p-value of 0.001; service level agreements had a p-value of 0.004. Therefore, the most significant factor was contractor competence. The findings of this study corroborates with literature review by Enshassi et al (2009) who found that the ICT sector is complex, as it includes large numbers of parties as owners (or clients), contractors, consultants, stakeholders, and regulators. Contractor performance is connected to several defining factors involving time, money, cost, and labor power.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATION

Summary of the Findings:

The general objective of this study was to find out the influence project contracting on the performance of ICT projects in Kenya. 50 respondents participated in the study comprising of 4 project manager and 46 project team members from Avia Networks Ltd, Nairobi County.

Procurement Procedures:

The study revealed that procurement procedures had a positive and significant effect on performance of ICT projects in Kenya as indicated by beta values ($t=2.41$, $p>0.05$). Majority of the respondents strongly agreed that a comprehensive feasibility study is carried out before contracting ($M=4.45$, $Sd.Dev =0.593$) and that a strategic assessment is carried out before contracting ($M=4.26$, $Sd.Dev =0.857$). It was also established from the project managers that project identification starts from an understanding of the organizations mandate and objectives. It involves identifying environmental problems to be addressed and the needs and interests of possible beneficiaries and stakeholders. An alliance is formed between key project participants, including the organization staff and contractor. Contractor proposals are always evaluated and a decision is made based on either a cost or best value basis. Contractor competence is based on contractor's credibility, expertise and reliability before they enter into any legal agreement.

Client-Contractor Relationship:

The study revealed that client-contractor relationship had a positive and significant effect on performance of ICT projects in Kenya as indicated by beta values ($t=4.493$, $p>0.05$). majority of the respondents strongly agreed there is provision of clear communication channels, combined with sharing the project timeline and regular updates in order to enhance collaboration and teamwork ($M=4.07$, $Sd.Dev=1.538$) and that the relationship between the contractor and the client is governed by the contract itself ($M=4.02$, $Sd.Dev=1.538$). It also was established from the project managers that client and the contractor have to interact frequently during the contract period for communication and joint problem solving, and this limits the degree of conflict possible. Also, the client is strongly dependent on the good will of the contractor both to deliver work of good workmanship, and to handle unforeseen circumstances in a co-operative way.

Stakeholder Support:

The study revealed that stakeholder support had a positive and significant effect on performance of ICT projects in Kenya as indicated by beta values ($t=1.106$, $p>0.05$). Majority of the respondents strongly agreed that stakeholder analysis is done during the initiating stage which greatly influence the development of an effective project strategy and increase the chances for a successful project outcome ($M=4.40$, $Sd.Dev=0.734$) and that stakeholders are identified early and their input used to shape the project to ensure their support and improve the effectiveness and efficiency of the project ($M=4.29$, $Sd.Dev=0.742$). It was also established from the project managers that stakeholder support in ICT projects is generally considered an important mechanism for improving project quality and ensuring successful project implementation. Stakeholder support is crucial in supporting decision making, to share knowledge, to reduce the level of subjectivity and to remain transparent. Stakeholder support also facilitates understanding of stakeholders' expectations and finally monitors if the project is done effectively.

Service Legal Agreement:

The study revealed that service legal agreement had a positive and significant effect on performance of ICT projects in Kenya as indicated by beta values ($t=3.068$, $p>0.05$). majority of the respondents strongly agreed that legal agreement regulatory controls are clearly specified ($M=4.33$, $Sd.Dev=0.742$) and that standards and procedures are clearly specified ($M=4.00$, $Sd.Dev=1.288$). It was also established from the project managers that SLAs are put in place detailing process maps, responsibilities and implementation of key performance indicators. Structures and reporting lines are defined and implemented. Besides, in a contracting agreement, regulatory controls such as legal documents policies, form systems, standards and procedures are ensured to create relationship between the organization and the contractor and specification of boundaries.

CONCLUSIONS:

The study concluded that procurement procedures affects performance of ICT projects in Kenya. It also concluded that the organization carry out comprehensive feasibility study and strategic assessments before contracting. Statement of needs was done before organization looks for the contractors and the need identification positively and significantly influenced performance of ICT projects in Kenya. The organization carried out rigorous analysis to identify the best, enter

into a legal contract with the contractors once they are selected and also established that organization carried out rigorous analysis to identify the best contractor.

The study concluded that the stakeholder support is crucial in the performance of ICT projects as it highlights the effective management of relationships between a project and its key stakeholders in order to ensure project success. Managing a project includes adapting the specifications, plans and approaches to different concerns and expectations of the various stakeholders.

The study concluded that the relationship between the client and the contractor affects performance of ICT projects in Kenya. There was a clear communication established between the client and the contractor so as to improve the performance of ICT projects. A written, detailed description of the scope of the project, regular status updates etc was always done so as to ensure that there is an organized client-contractor interactions.

The study concluded that service level agreements affects performance of ICT projects in Kenya. The organization had structures and reporting lines that were well defined and implemented for contracting. The contracting agreements, regulatory controls, legal documents, standards and procedures were clearly specified and SLAs were not ambiguous and incoherent for contracting. This has positively and significantly influenced performance of ICT projects in Kenya.

RECOMMENDATIONS:

The study recommended that the organization should carry out need identification before contracting their ICT project as it affects performance of the organization. This emanates from the fact that quite a number of the respondents disagreed that combination of pooled knowledge and technical capacities that allow an organization to be competitive in the marketplace is considered before contracting. Carry out rigorous analysis to identify the best contractor, enters into a legal contract with the contractors once they are selected and also established that organization carries out rigorous analysis to identify the best contractors.

The study recommended that there is need to understand stakeholder influence is a key ingredient of successful completion of ICT projects in Kenya. The organizations project managers should try to acknowledge concerns of all stakeholders and in a dialogue seek to reconcile conflicting interests, culminating in the effective performance of ICT projects.

The study recommended that there should be a mutual understanding between the client and the contractor in the contracting relationship so as to handle both opportunities and threats. Effective communication channels should be established and every stage in the project undertaking should be reported to the client so as to ensure clear understanding and evaluation of project objectives towards user satisfaction.

The study also recommended that the organizations should have structures and reporting lines that are well defined and implemented for contracting. The contracting agreements, regulatory controls, legal documents, standards and procedures should be clearly specified not ambiguous and incoherent for contracting. This is due to the findings that most of the respondents strongly disagreed that there is a well defined and implemented structures and reporting lines for contracting. This will positively and significantly influence performance of ICT projects in Kenya.

Suggestions for Further Study:

This study suggested that further studies should be carried out on how project management practices influence performance of ICT projects in Kenya.

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