



**DETERMINANTS OF IMPLEMENTATION OF COUNTY GOVERNMENT CONSTRUCTION PROJECTS IN NAIROBI,  
KENYA**

**KENNEDY MATHEKA MUSYOKA, DR. MAKORI MORONGE**

**DETERMINANTS OF IMPLEMENTATION OF COUNTY GOVERNMENT CONSTRUCTION PROJECTS IN NAIROBI, KENYA**

<sup>1</sup> Kennedy Matheka Musyoka, <sup>2</sup>Dr. Makori Moronge

<sup>1</sup>Jomo Kenyatta University of Agriculture (JKUAT), Kenya

<sup>2</sup>Jomo Kenyatta University of Agriculture (JKUAT), Kenya

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**ABSTRACT**

*Construction has become an important player in the economy of many countries, especially developed countries. This industry contributes to the GDP and employment rate of many nations and for this reason it is considered vital for the economic development of any nation. The role the construction industry plays in socio-economic development is significant. The purpose of this study was to examine the determinants of implementation of county government construction projects. The specific objectives of the study were to examine; project planning and project communication on implementation of county government construction projects. The study adopted a descriptive survey and a census technique was used for the data was collected through the use of questionnaires. The data findings analyzed also showed that taking all other independent variables at zero, a unit increase in project planning lead to a 0.765 increase in implementation of county government construction projects; a unit increase in project communication lead to a 0.706 increase in implementation of county government construction projects. This inferred that project planning contributed most to implementation of county government construction projects. Based at 5% level of significance, project planning had a .000 level of significance and project communication showed a .002 level of significance. The study was a milestone for further research in the field of county government project management in Africa and particularly in Kenya. The findings had demonstrated role of project planning and project communication on the implementation of county government construction projects. The current study should therefore be expanded further in future in order to determine other factors that affect the implementation of county government construction projects since the study established there could the remaining 34.20% was explained by the variables or other aspects outside the model. Further, the existing literature indicated that as a future avenue of research, there was need to undertake similar research in other devolved county governments and national county government projects in Kenya and other counties and countries in order to establish whether the explored factors can be generalized to affect implementation of county government construction projects.*

**Key Words:** Project Planning, Project Communication, County Government Construction Projects

## INTRODUCTION

Construction has become an important player in the economy of many countries, especially developed countries. As mentioned by Olawale (2010), this industry contributes to the GDP and employment rate of many nations and for this reason it is considered vital for the economic development of any nation. The role the construction industry plays in socio-economic development is significant. It provides the basis upon which other sectors can grow by constructing the physical facilities required for the production and distribution of goods and services. The construction industry has a significant multiplier effect on the economy as a whole (Morris, 2008).

Delays and cost overruns in construction sector investments can raise the capital-output ratio in the sector and elsewhere bringing down the efficacy of investments (Morris, 2008). Thus, successful management of processes employed in acquisition of these assets is to a large extent, determined by the amount of resources expended, time taken and quality when compared to similar projects. Infrastructure includes the capital required to produce economic services from utilities (like electricity, telecommunication, and water) and transport (roads, bridges, seaport, and airports) and is central to promoting economic activity (Chan, Scott and Chan, 2004). Individuals, private firms or public entities are continually engaging in acquisition of physical assets in various forms such as, residential, commercial buildings, hospital, schools/institutions, and development infrastructure like water, roads, electricity and telecommunication. These assets represent major capital investment motivated by market demands or perceived needs. To remain competitive in profit or non-profit engagements, these entities focus on processes and procedures that offer value and competitive advantage. Understanding the customer needs and appropriately deploying the

available resources in meeting customer expectations offer competitive edge over competitors in product and service provision. Thus, efficient and effective resource management through appropriate use of tools and techniques in asset acquisition is critical. Customers are demanding for better quality product through efficient and timely deliveries at low price. It is therefore important, that time, cost, and quality of constructed facilities are efficiently managed in the entire project life cycle for effective service or product delivery

Lin-lin et al., (2014) conducted a study on understanding of county government funded projects in China's infrastructure and construction projects. They established that the development of public projects practices in China remains relatively slow despite the urgent need to promote this mechanism for solving socio-economic and environmental disputes in PIC projects. Thus, a four-step strategic plan is suggested to be established to overcome main barriers for the implementation of public participation and promote its development in China.

Ektewan and Ogunlana (2006) did a study on public hearings in Thailand's infrastructure projects. They found that the projects had moderate to low effectiveness primarily because the participation and management performance aspects did not meet the participants' expectations. The relationships of evaluation and satisfaction indices were examined. The hearing participants focus both on the process and outcome of hearings. On the other hand, Ophiyaandri *et al.*, (2013) did a study critical success factors for community-based post-disaster housing reconstruction projects in the pre-construction stage in Indonesia. They revealed that it was found that 12 factors are considered to be the critical success factors: transparency and accountability, appropriate reconstruction

policy/strategy, an understanding of the community-based method, gathering trust from the community, facilitator capacity, good coordination and communication, sufficient funding availability, implementer capacity, having a significant level of community participation/control, county government support, involvement of all community members, and successful beneficiary identification (McGrew & Bilotta, 2007).

In Kenya like other countries construction industry is one of major industry contributing significantly to the socio-economic development growth. Achieving project implementation on time, within budget, at specified quality standards, and most importantly without unprecedented cost escalations is major criterion of success of project. Generally, a project is considered successful if the project is completed within a stated cost or budget and time. Although the county government of Kenya sets aside huge sums of money to be spent in construction sector, the industry is facing a lot of challenges such as the expenditure exceeding the budget, delay to complete the project in time, the building defects and over-reliance on foreign workers (RoK, 2012).

Most construction projects especially road 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 (Nyandika, 2014).

### **Statement of the Problem**

The increase of project based works in urban areas in the construction industry is necessitated by increased demand due to migration and rapid

urbanization (UNCHS, 2006). However the sustainability of this sector is in jeopardy. The concept of delay in the substantial implementation of county government funded construction projects is a global phenomenon. For instance, while evaluating the progress and reports of 28 highway projects constructed during the period 2006-2009 in Jordan, Battaineh (2006) observed that the average ratio of actual implementation time to the planned contract duration is 160.5% for road works.

According to the statistics derived from the Kenya National Bureau of Statistics' (2013), it is adept to reiterate that the county government funded construction projects in Kenya contributes to 7% of the country's gross domestic product (GDP). The challenge of demand for quality service and upcoming reforms for most of the county government funded construction projects has realized the need for quality service delivery and efficiency through outsourcing practices (World Bank, 2014). According to Ahmed et al., (2012), the urban construction project is bound to fail due to slow rate in implementation due to lack of implementation proper planning and contract management. This according to UNCHS, (2006), can result to losses of over 19.82%. However, in Kenya, delays in project implementation are a common problem in the construction industry not only with an immeasurable cost to society but also with debilitating effects on the contracting parties

While several studies (Musa, 2010: Karimi, 2012; Tulakhaba 2011, Mwandali, 2016) have been done focusing on different aspects of project implementations and further appreciating the crisis in every county government funded construction project in terms of implementation, all empirical evidences are in short of the factors affecting implementation of county government funded construction projects. It is on this premise the study seeks to establish the determinants of

implementation of county government construction projects in Kenya.

### **Objectives of the Study**

The purpose of the study was to establish the determinants of implementation of county government construction projects in Nairobi, Kenya. The specific objectives:-

- To examine how project planning affect implementation of county government construction projects in Nairobi, Kenya.
- To establish how project communication influence implementation of county government construction projects in Nairobi, Kenya.

## **LITERATURE REVIEW**

### **Planning Theory**

This theory guided the study in establishing the relationship between project planning and successful implementation of county government construction projects. Hume is generally attributed with drawing attention to the ought distinction: what is does not necessarily lead to what should be (Wenz, 2013). Although what is may place restrictions on what can be, our human capacity to reflect on possibilities and make choices means that what is and what should be are connected by values. This connection exists whether it is recognized or not. Where applications of values are not made explicit, they are implicit in underlying cultural conditioning. The fundamental need for a position and a meaning for our lives and for our species dominates whatever system of thought we espouse. We cannot exist conceptually without such cosmologies, yet many people are unaware of the values upon which they have founded their structure of meaning (Palmer, 2012).

Recognizing this evaluative connection is crucial for planning. Due to its future orientation, planning influences what will/can be. In a just society, it must

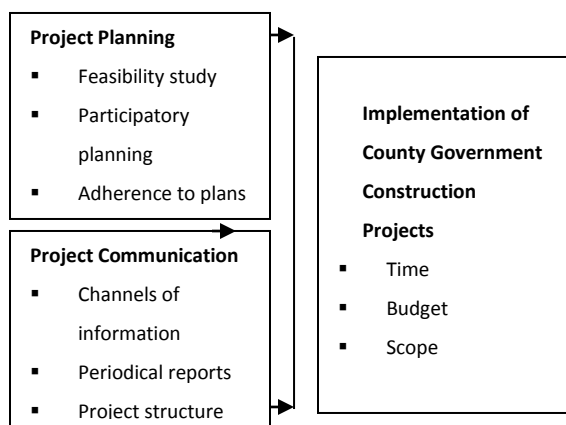
consequently raise the question of what should be by acknowledging the role of values. What is corresponds to knowledge that is held - what ought to be corresponds to actions prior to their taking place. In consequence, planning relates to the linkage: value. It therefore has a normative aspect. This normative consideration must be integrated into planning on both theoretical and practical levels. In addition, recognizing planning as an "intervening variable" suggests a need to recognize the importance of multiple values. In consequence it is necessary to consider how these values can be determined and how they can be acted upon. In a sense, then, planning is paradoxical: it is concerned with understanding the activity and process itself, and is therefore descriptive. Yet simultaneously, it is concerned, in a pro-active way, with the formation of future states, and is therefore prescriptive (Wachs, 2013).

### **Social Exchange Theory**

This theory guided the study in establishing the relationship between project communication and successful implementation of selected county government construction projects. One way of analyzing social interaction among project team members is through the social exchange theory. This theory also called the communication theory of social exchange is a commonly used theoretical base for investigating individual's knowledge-sharing behavior. According to Blau (1964) and Molms (2001), this theory explains how individuals regulate their interactions with other individuals based on a self-interest analysis of the costs and benefits of such an interaction. That is, it suggests that human beings make social decisions based on perceived costs and benefits, such that they seek to maximize their benefits and minimize their costs when exchanging resources with others (Blau, 1964) and (Molm, 2001). These benefits need not be tangible since individuals may engage in an interaction with the expectation of reciprocity

(Gouldner, 1960). In such exchanges, people help others with the general expectation of some future returns, such as gaining desired resources through social reciprocity. In order to maximize the resources gained, individuals may build social relationships with others by sharing their knowledge. The fundamental dimension in the social exchange theory is individual cognition, which may include perceived benefits and organizational commitment. Forsythe et al (2006) defined the term "perceived benefits" as the individual's subjective perception of gain from their behaviors. The theory thus declares that individuals engage in social interaction based on the expectation that it will in some way lead to social rewards such as approval, status, and respect (Forsythe et al, 2006). For example, Kankanhalli et al. (2005) believes that an individual's perceived benefit is one of the major factors that encourage employees to contribute knowledge to electronic knowledge repositories. According to Ma and Agarwal (2007), the amount of knowledge that people contribute to a virtual community depends on the level of satisfaction that they too derive from being members of the community.

**Conceptual Framework**



**Independent Variables**                      **Dependent Variable**

**Figure 1: Conceptual Framework**

**Project Planning**

Lester and Lester (2012), contends that the project plan is the road map that defines how to get to the end. Project planning is a major issue to be looked into when we deal with the project implementation. Effective project planning requires particular skill far beyond writing a document with schedules and budget. Unlike small projects that involve few activities, complex projects that go beyond a certain threshold level of magnitude should proceed on the basis of a sound formal planning platform without which there may be chaos. Sound formal planning provides the basis for organizing the work on the project and allocating responsibilities to individuals. It is not only a means of communication and coordination between all those involved in the procurement project but also induces people to look ahead besides instilling a sense of urgency and time consciousness (Barasa, 2014).

Project plans on implementation of county government construction projects aim to ensure that entities work within the budgets and money allocated for various purposes fulfill their intended purpose. One way is through strict legislation that would dwell on waste reduction of which would be aligned to the national waste management policy and working frameworks that ensure transparency and plans that ensure the selected tenders are the most economically advantageous ones (Rotich, 2011). The establishment of the institutions to regulate monitor and supervise the implementation of proposal agreements on infrastructure or development proposals and for connected purposes.

## **Project Communication**

Communication is a key issue for successful project implementation and management. It is specifically a challenging task for projects where a number of interdependent role players are needed to achieve the desired project outcomes (Abdulaziz *et al.*, 2015). Communication is very essential in project execution. It plays a vital role in all stages of construction such as design production, organization and management (Mehra, 2009). Statistics have shown that over 50% of projects in Africa are unsuccessful due to inappropriate communication method (Kasim & Usman, 2013). Various professionals in the construction industry must communicate effectively for any given project to be successful. During the course of project execution, information in the form of drawings, specifications and construction methods must be fully disseminated (Aishwi & Underwood, 2009).

Some professionals may not be able to understand some aspects of a project if little information are available thus leading into project failure. Ineffective communication system leads to demotivated workforce, design errors, slowdown in the entire job and failure in production (Topli & Ilyasu, 2014). Construction professionals should communicate throughout all construction stages. There is need for professionals within the construction industry to appropriately communicate with each other for the successful delivery of performance goals within the organization. Scope of work and details of construction are communicated by means of drawings, contract documents, addenda and specifications (Kasim & Usman, 2015).

## **Empirical Review**

### **Project Planning**

In his study, Kasoo (2010) reiterated in his findings that besides community participation, sources and

composition of project planning & organizing has a bearing on project success as well. Ayodele (2011) asserts that when he reported that one major cause of abandonment of donor funded construction projects in Nigeria was due to inadequate planning & organizing. His study report further emphasizes the importance of planning & organizing resources in project implementation. The study is in consonance with Yang and Jackson's affirmation on the stalled pumped-hydro energy storage in the United States that planning & organizing and financial uncertainties could be one of the projects' limiting factor (Yang & Jackson, 2011).

### **Project Communication**

Abdulziz *et al.*,(2016) did a study on the role of communication and coordination in project success. In this context, a two-stage case study of construction phase delay control for an oil and gas industrial project is presented. A process improvement methodology was carried out in the first stage and the root causes for the delays were identified. The investigation results revealed that the scope of one item of work, piping, dominated a large portion of delays. It was found that piping packages were not processed smoothly due to four main causes: incomplete testing, frequent piping modifications, incomplete as-built drawings, and incomplete punch listing. Seventy percent of the delays were caused by incomplete testing activities and incomplete as-built drawings. The improvement study suggested establishing a new unit for piping test package control and coordination. The review process was improved and the dedicated control team was implemented for the second unit, resulting in a substantial drop in the number of delayed test packages (down from 48 to 8%) and punch list items (down from 3,075 to 2,371). The findings of the case study demonstrate the importance of communication and coordination in successful project management for complex

projects. The case presented is an example of process improvement use for successful delay management

## **RESEARCH METHODOLOGY**

The study was a descriptive survey design to establish the determinants of implementation of county government construction projects in Nairobi City County, Kenya. According to Creswell (2012) this design is used when both quantitative and qualitative data, together, provide a better understanding of the research problem than either type by itself, when one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions and in case of pragmatism (practicality; multiple view points; biased and unbiased; subjective and objective). The study targeted all the 79 county government funded construction projects in the county which consisted of 14 road projects, 37 housing projects and 28 water projects. The study adopted a census technique to collect primary data. The study used the questionnaire to facilitate gathering of information from the selected respondents. Data collected was analyzed using quantitative and qualitative methods with the help of (SPSS) version 22 and excel. Data processing was carried out through editing, coding and classification.

## **DATA ANALYSIS, PRESENTATIONS AND DISCUSSIONS**

A total 79 questionnaire were administered to project managers and 61 questionnaires were returned translating to 77.22% response rate. Kaiser-Meyer Oikin test gave a value of 0.755, which was higher than the recommended minimum value of 0.6 showing the sample was adequate for drawing inferences from the study.

The study sought to establish the gender distribution of the respondents. From the findings, both male and female respondents participated in

the study and results showed that 49.18% (30) were male, 40.98% (25) were female and 9.84% (6) of the respondents did not indicate their gender. The results indicated that the two genders were adequately represented in the study since there is none which was more than the two-thirds.

A total of 35 respondents answered this question and the findings showed that 53.85% of the respondents were aged between 18 to 35 years, 32.76% were more than 35 years old while 13.39% did not indicate their age. The findings were in agreement with those of Price & Banham (2011) who established that there are two natural age peaks of the late 20s and mid 40s which were correlated to implementation of the projects. It was important to establish the education level held by the study respondents in order to ascertain if they were equipped with relevant knowledge and skills on county government construction projects. Majority (55%) had college education level, 25% had university education level, 15% had post graduate education level, 1% had secondary education level and 4% had professional qualifications. These findings implied that most of the respondents were qualified to understand the nature of the study problem. The study determined the working experience held by the respondents in order to ascertain the extent to which their responses could be relied upon to make conclusions on the study problem using their working experience. From the findings (26%) indicated to have a working experience of 6-10 years, 45% had a working experience of less than 5 years, 25 % had a working experience of 11-15 years and 4% had a working experience of 16 years and above. The study sought to examine the determinants of implementation of county government construction projects in Nairobi, Kenya, attributed to the influence of project planning and project communication. The study was particularly interested in three key indicators, namely implementation within budget, schedule and scope, with all the three studied over



a 5 year period, running from 2012 to 2016. Table 4.6 below presents the findings.

Findings revealed improved implementation county government construction projects across the 5 year period running from the year 2012 to 2016. Implementation of projects within budget recorded low positive growth with a majority affirming to less than 10% in 2012 (38.7%) and 2013 (39.8%), to 10% in 2014 (30.9%) then more than 10% in 2015 (32.4%) and 2016 (30.4%). A similar trend was recorded implementation of projects within scope, growing from less than 10% (32.8%) in 2012, to more than 10% in 2013 (28.3%), 2014 (28.5%) and 2015 (27.3%). Implementation of projects within schedule further recorded positive growth with a majority affirming to less than 10% in 2012 (38.9%) and 2013 (33.8%), to 10% in 2014 (22.5%) and 2015 (32.5%) then by more than 10% in 2016 (32.8%). It was deduced from the findings that key implementation of county government construction projects indicators had considerably improved as influenced by among other attributes, the influence of project planning and project communication. Implementation of projects in time, implementation of projects within budget and implementation of projects within scope have particularly improved by at least 10 percent across most of the projects pointing to the significance of project planning and project communication in the implementation of county government construction projects

### Project Planning

**Table 1: Project Planning**

Statement	N	Mean	Std
The project prepares an annual project performance plan	35	3.654	.234
The project performance plan has description of the project requirement	45	3.234	.233

The study sought to assess the influence of project planning on implementation of county government construction projects in the study area. This presented findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Very Great Extent; 4 = Great Extent; 3 = Moderate Extent; 2 = Small Extent; 1= Very Small Extent). Table 1 presents the findings. The scores of 'Very Great Extent' and 'Great Extent' have been taken to represent a statement not agreed upon, equivalent to mean score of 3.5 to 5.0. The score of 'Moderate Extent' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'Small Extent' and 'Very Small Extent' have been taken to represent a statement highly agreed upon equivalent to a mean score of 1.0 to 2.5

The study findings in Table 1 indicated that the respondents indicated to a great extent that the project prepares an annual project performance plan (3.654); The project performance plan has description of the project requirement (3.234); the community involvement yields sustainable projects (3.098); The project performance plan had the estimated value of the project requirement (3.212); Project plan details the performance method to be used (3.789); The project plan has details the expected duration of the project ( 3.123) The study findings corroborates with literature review by Okafor (2005) who observed that when project planning is important on the implementation of the county government funded construction projects.

The project performance plan has the estimated value of the project requirement	33	3.098	.431
Project plan details the performance method to be used	22	3.212	.169
The project plan has details the expected duration of the project	46	3.123	.032
<b>Composite Mean</b>		<b>3.345</b>	

### Project Communication

The study sought to assess the influence of project communication on implementation of county government construction projects in the study area. This section presents findings to statements posed in this regard with responses given on a five-point likert scale (where 5 = Very Great Extent; 4 = Great Extent; 3 = Moderate Extent; 2 = Small Extent; 1= Very Small Extent). Table 4.5 presents the findings. The scores of 'Very Great Extent' and 'Great Extent' have been taken to represent a statement not agreed upon, equivalent to mean score of 3.5 to 5.0. The score of 'Moderate Extent' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'Small Extent' and 'Very Small Extent' have been taken to represent a statement highly agreed upon equivalent to a mean score of 1.0 to 2.5

The study findings in Table 2 the respondents indicated to a great extent that the project team has experience in interpretation of working drawings (3.123); The poor and distorted information slow down project implementation and lead to extra cost (3.742); The unclear channels of communication has slowed and culminated delay in project implementation (3.832); they do regular site

meetings between the consultants and contractors (3.521); There is regular review and adjustment of communication report ( 3.810); there were regular annual reports (3.729); There is information on work breakdown structure necessary for division of labour (3.086).

The study findings corroborate with literature review by Heldga (2008) confirmed that project communication is very important for the successful implementation of projects. During programme design and implementation, emphasis is placed on project communication so that the services provided can continue throughout the project. Abdulziz et al.,(2016) indicated that project communication and coordination in project success. In this context, a two-stage case study of construction phase delay control for project is presented. Communication is a key issue for successful project implementation and management. It is specifically a challenging task for projects where a number of interdependent role players are needed to achieve the desired project outcomes (Abdulaziz *et al.*, 2015). Communication is very essential in project execution. It plays a vital role in all stages of construction such as design production, organization and management (Mehra, 2009).

**Table 2: Project Communication**

Statement	N	Mean	Std
The project team has experience in interpretation of working drawings	25	3.123	.231
The poor and distorted information slow down project implementation and lead to extra cost	33	3.742	.459
The unclear channels of communication has slowed and culminated delay in project implementation	44	3.832	.421
We do regular site meetings between the consultants and contractors	32	3.521	.569
There is regular review and adjustment of communication report	29	3.810	.274
There are regular annual reports	30	3.729	.052
There is information on work breakdown structure necessary for division of labour	27	3.086	.091
<b>Composite Mean</b>		<b>3.253</b>	

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

The study sought to assess the influence of project planning on implementation of county government construction projects in Kenya. A majority of respondents were found to agree that the projects prepare an annual project performance plan. The project performance plan has description of the project requirement. The project performance plan has the estimated value of the project requirement. The project plan details the performance method to be used. The project plan has details the expected duration of the project. This indicates that project planning is important factor on the implementation of the county government funded construction projects.

The study sought to assess the influence of project communication on implementation of county government construction projects in Kenya. The

study findings indicated to a great extent that the project team has experience in interpretation of working drawings. The poor and distorted information slow down project implementation and lead to extra cost. The unclear channels of communication has slowed and culminated delay in project implementation. They do regular site meetings between the consultants and contractors. There is regular review and adjustment of communication report. There were regular annual reports. There is information on work breakdown structure necessary for division of labour. This indicates that project communication is important factor on the implementation of the county government funded construction projects.

The study sought to examine the determinants of implementation of county government construction projects in Kenya, attributed to the influence of

project planning, project communication, project contract management and project knowledge management over a 5-year period, running from 2012 to 2016. Finish of the projects within schedule recorded a slow positive implementation. Finish of the projects within time further recorded a slow positive implementation. Finish of the projects within scope also recorded a slow positive implementation. From inferential statistics, a positive correlation is seen between each determinant variable and implementation of county government construction projects. The strongest correlation was established to be project planning. Both independent variables were found to have a statistically significant association with the dependent variable at ninety-five level of confidence. Analysis of variance was further done to show whether there is a significant mean and all variables were found to be significant.

### **Conclusions of the Study**

Based on the study findings, the study concluded that implementation of county government construction projects in Kenya was affected by the independent variables. The project planning followed by project communication were the major factors that mostly affect implementation of county government construction projects in Kenya.

The study concludes that project planning is the first important factor that implementation of county government construction projects in Kenya. The regression coefficients of the study show that project planning has a significant influence on implementation of county government construction projects in Kenya. This implies that increasing levels of project planning would affect the levels of implementation of county government construction projects in Kenya. This shows that project planning affect implementation of county government construction projects in Kenya.

The study concludes that project communication is the second important factor that implementation of county government construction projects in Kenya. The regression coefficients of the study show that project communication has a significant on implementation of county government construction projects in Kenya. This implies that increasing levels of project communication would affect the levels of implementation of county government construction projects in Kenya. This shows that project communication influence implementation of county government construction projects in Kenya.

### **Recommendations of the Study**

Based on the study findings, the study found out that project planning and project communication were the major factors that mostly affect implementation of county government construction projects in Kenya and suggest the following recommendations:

The study recommends for enhancement of project planning in the projects. There is need to develop project plans that describe the project requirement, the estimated value, details the performance method to be used, the expected project scope, budget and duration of the project. This will enhance effective implementation of the county government construction projects.

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

### Suggestions for Further Studies

The study is a milestone for further research in the field of county government project management in Africa and particularly in Kenya. The findings have demonstrated role of project planning and project communication on the implementation of county government construction projects. The current study should therefore be expanded further in future in order to determine other factors that affect the implementation of county county county

government construction projects. Further, the existing literature indicates that as a future avenue of research, there is need to undertake similar research in other devolved county governments and national county government projects in Kenya and other counties and countries in order to establish whether the explored factors can be generalized to affect implementation of county government construction projects.

### REFERENCES

- Adan, I. H. (2012). *Influence of stakeholders role on performance of constituencies development fund projects a case of Isiolo North Constituency, Kenya*. Available at: <http://researchkenya.or.ke/node/18866>
- Ahmed S, Azher S, Castillo M, Kappagantula, P. (2012) Construction Delays in Florida; An Empirical Study, Florida.
- Aiyetan, O.A., Smallwood, J.J. & Shakantu, W. (2008). Influences on construction project delivery time performance. *In the proceeding of Third Built Environment conference*, Cape Town, South Africa
- Al-Kharashi, A. & Skitmore, M. (2009). Causes of delays in Saudi Arabian public sector construction projects. *Construction Management and Economics*, 27(1), 3-23.
- Ardity, D., Akan, T., & Gurdamar, S. (2009). Adherence to cost estimates in public projects: *International Journal of Project Management*.
- Babbie, E. (2009). *Survey research methods* (2nd ed.). Belmont: Wodsworth.
- Barney, J. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32, 1231-1241.
- Battaineh R.K (2006) 'Causes of Delay in Large Building Construction Projects', *Journal of Management in Engineering*,(11), 2.
- Binder, (2008). User Satisfaction and Sustainability of Drinking Water Schemes in Rural Communities of Nepal.
- Bridget, S., and Lewin, C. (2005). *Research Methods in the Social Sciences*. London: Sage publications
- Bordens, K. S., and Abbott, B.B. (2008). *Research design methods: A process approaches* (7<sup>th</sup> ed.). New York, NY: McGraw-Hill.
- Burke, R. (2004). *Project Management Planning and Control Techniques*. 4th edition, New Delhi India: Pearson Education.

Callahan, M. T., D. G. Quackenbush, and J. E. Rowings, (2006). "Construction Project scheduling". USA: McGraw-Hill.

Chandran C. (2004). *Research Methods: A qualitative Approach with Illustrations from Christian Ministries*. Nairobi: Daystar University.

Chan, M., & Kumaraswamy, M. (2007). A comparative study of causes of time overruns in Hong Kong construction projects. *International Journal of Project Management* 15(1), 55-63.

Chan, M., Scott, D. & Chan, L. (2004). Factors affecting the success of a construction project: *Journal of Construction Engineering and Management* 130 pp. 153.

Conner, K.R. (1991). A historical comparison of resource-based theory and five schools of thought within the industrial organization economics: Do we have a new theory of the firm? *Journal of Management*, 17, 121-154.

Cooper D R, Schindler PS (2005). *Business Research Methods*. (8th ed.). Mc Graw-Hill, New Delhi, India.

Creswell, J. W. (2003). *Research design: Quantitative, qualitative, and mixed methods approaches* (2nd Ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative approaches to research*. New Jersey: Merrill/Pearson Education.

Cronbach, L. J. (1971). *Test validation*. In R. L. Thorndike (Ed.). *Educational Measurement* (2nd Ed.). Washington, D. C.: American Council on Education

Damodaran, L. (2011). User involvement in the systems design process: a practical guide for users, *Behaviour & Information Technology*, 15(6), 363-377

Ektewan, M. & Ogunlana, S.O. (2006). Public hearings in Thailand's infrastructure projects: effective participations?, *Engineering, Construction and Architectural Management*, 13(4), 343 – 363

Flyvbjerg, B. (2005), Policy and Planning of Large Infrastructure Project Problems, Causes, Cures. *World Bank Policy Research Working Paper 3781*, Cambridge University Press, Cambridge.

Flyvbjerg, B., Holm, S., & Buhl, L. (2004). What Causes Cost Overrun in Transport Infrastructure Projects?: *Transport Reviews*, 24 (1), 3-18.

Fudge, N. & Wolfe, C.D.A. (2008). Assessing the promise of user involvement in health service development: ethnographic study. *BMJ*, 336, 313

Ghazala, M. & Vijayendra R. (2011) Evaluating Community Based and Community Driven Development: A critical review of the Evidence. *Working Paper, Development research Group, World Bank*.

Goldratt, Eli M.. (1984). *Essays on the Theory of Constraints*. [Great Barrington, MA]: North River Press. ISBN 0-88427-159-5.

Hamel, G., & Prahalad, C.K. (1996). *Competing for the Future*. Boston: Harvard Business School Press.

Kvaye, M., & Anderson, R. (2000). Continuous improvement: The ten essential criteria. *The International Journal of Quality & Reliability Management*, 16(5), 485.

Kagiri, D., & Wainaina, G. (2009). *Time and Cost Overruns in Power Projects in Kenya: A Case Study of Kenya Electricity Generating Company Limited*, Nairobi. (2004). *Solving Tough Problems: An Open Way of Talking, Listening, and Creating New Realities*. Berrett-Koehler Publishers.

Kaliba, C. Muya, M. & Mumba, K. (2009), Cost Escalation and Schedule Delaying Building Construction Projects in Zambia, *International Journal of Project Management*, (27),5, 522-531.

Karimi, R.B.(2008), "Factors which are Critical in Project Cost Overruns: A Case Study of Ministry of Water Resources Projects", Unpublished MBA Thesis, University of Nairobi.

Kog, C., & Loh, K. (2012). Critical Success Factors for Different Components of Construction Projects. *Journal of Construction Engineering and Management* 138(4), 520-528.

Koskela, Howell ., & Ballard, G. (2002). Should project management be based on theories of economics or production?: *Building Research and Information*, Vol. 34, No. 2

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

Kuen, C.W., Zailani, S., & Fernando, Y. (2009). Critical factors influencing the project success amongst manufacturing companies in Malaysia. *African Journal of Business management*, 3(1), 16-27.

Kumar, C. (2000). *Research Methods*.(2<sup>nd</sup>edn.). New York: Harper and Row.

Lin-lin, X., Yang, Y. Hu, Y. & Chan, A.P.C. (2014). Understanding project stakeholders' perceptions of public participation in China's infrastructure and construction projects: Social effects, benefits, forms, and barriers", *Engineering, Construction and Architectural Management*, 21(2), 224 – 240

Maina, B. M. (2013). *Influence of stakeholders' participation on the success of the economic stimulus programme: a case of education projects in Nakuru County, Kenya*. Retrieved from

Maltz, A.C., Shenhar, A.J. & Reilly, R.R. (2003). Beyond the balanced scorecard: Refining the search for organizational success measures, *Long Range Planning*,(36),2, 187-204.

Malkat, M & Byung-Gyoo, K. (2012). *An Investigation on the Stakeholders of Construction Projects in Dubai and Adjacent Regions*. Available at: [www.ipedr.com/vol45/016-ICMTS2012-M00008.pdf](http://www.ipedr.com/vol45/016-ICMTS2012-M00008.pdf)

Marchewka, J.T. (2006). *Information Technology Project Management: Providing Measurable Organizational Value*, 2nd ed., Wiley, New York, NY.

McGrew, J.F., Bilotta, J.G. (2007) The effectiveness of risk management: measuring what did not happen, *Manage Decision*, 38(4) 293-300.

Mono, O.R. (2013). Determinants of successful delivery of housing construction Projects in the Ministry of Housing in Nairobi, Kenya. Retrieved from: <http://ir-library.ku.ac.ke/handle/123456789/6213>

Morris, G., & Hough, H. (2008). *The Anatomy of Major Projects: A Study of the Reality of Project Management*. Chichester; New York: Wiley, pp. 502-511.

Mugenda, O.M and Mugenda, A.G (2003) *Research Methods, Quantitative & Qualitative Approaches*. Acts Press: Nairobi

Müller, R., & Jugdev, K. (2012). Critical success factors in projects Pinto, Slevin, and Prescott – the elucidation of project success. *International Journal of Managing Projects In Business*, 5(4), 757-775.

Musa, G. H., (2009) "Determination of Factors Influencing Projects Delays in Water Projects in Kenya: The Case of County county county government Funded Projects", Unpublished MBA Thesis University Of Nairobi.

Mwandali, D., (2006) "Analysis of Major Factors that Affect Projects Management: A Case of Kenya Railways Projects", Unpublished MBA Thesis, University of Nairobi.

Nana Agyeman (2010), *Delays in building construction projects in Ghana*.

Nyandika Fred(2014); *Influence of stakeholders' participation on performance of road projects at Kenya National Highways Authority* ; A Research Project Submitted in Partial fulfillment for the award of degree of master of science in project management of Jomo Kenyatta University of Agriculture and Technology

National Tax Payers Association (2010), *Utilization of County county county government Revenue*: County county county government Printers, Nairobi

Neuman, W.L. 2006. *Social Research Methods: Qualitative and Quantitative Approaches*. Pearsons Education Inc. Boston. USA

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

O'Brien, S., & Ibbs, C. (2005). The Paradox of using Tacit and Explicit Knowledge Strategies to face Dilemmas: *Management Decision*, Vol. 43 No. 1, pp. 102-112.

Olawale, A., & Sun, M. (2010). Cost and Time Control of Construction Projects: Inhibiting Factors and Mitigating Measures in Practice. *Construction Management and Economics* 28(5), 509-526.

Olima, H.A. (2011). *The Dynamics and Implications of Sustaining Urban Spatial Segregation in Kenya: Experiences from Nairobi Metropolis*. Paper presented at the International Seminar on Segregation in the City Held at Lincoln Institute of Land Policy in Cambridge, MA, USA, July 25-28, 2001.

Onchoke, N. K. (2013). *Factors influencing performance of community development projects in Kenya: a case of Kisii Central District*. Available at: <http://ir-library.ku.ac.ke/handle/123456789/6205>



Ondieki, W. M. (2011). *Factors influencing stakeholders' participation in monitoring and evaluation of Local Authority transfer fund projects in Kisii municipality, Kenya*. Available at <http://erepository.uonbi.ac.ke:8080/handle/123456789/3906>

Onions, W. (2007). *A Knowledge Based Theory of Project Management*: McGraw-Hill, pp 61-72.

Ophiyandri, T., Amaratunga, D., Pathirage, C. & Keraminiyage, K. (2013). Critical success factors for community-based post-disaster housing reconstruction projects in the pre-construction stage in Indonesia, *International Journal of Disaster Resilience in the Built Environment*, 4(2), 236 – 24

Republic of Kenya.(2014). Kenya National Bureau of Statistics.*Economic Survey 2014*. Nairobi: County county government Printer.

Rundquist, J. (2008) World Class or Good Enough: the Choice of partner when Outsourcing New Product Development in medium sized firms. *International Journal of Innovation and Technology Management* 5: 429-451.

Sambasivan M. and Yau W.S., (2007). Causes and effects of delays in Malaysian construction industry. *International Journal of Project Management* 25, 517 -526.

Sauer, C. & Reich, H. (2007). What do we want from a Theory of Project Management?: *International Journal of Project Management*, A response to Rodney Turner”, Guest editorial,(25),1-2.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*.(4<sup>th</sup> edn.). Harlow: Financial Times Prentice Hall.

Schumpeter, J.A. (1950). *American Institutions and Economic Progress*. New York: Harper & Brothers.

Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*. (4<sup>th</sup> edn.). USA: John Wiley & Sons Publishers.

Seboru, M. A. (2006). An investigation into factors causing delays in road construction projects in Kenya, unpublished MA Project, Faculty of Architecture, design and Development, University of Nairobi

Serdar S. Durmusoglu, (2009). The role of top management team's information technology (IT) infrastructure view on new product development: Conceptualizing IT infrastructure capability as a mediator. *European Journal of Innovation Management*, 12(3), 364 – 385

Tabish, S., & Jha, K. (2012). Success Traits for a Construction Project. *Journal of Construction Engineering & Management*,138(10), 1131-1138.

Talukhaba, A.A, (2008). “Time and Cost Performance of Construction Projects”, Unpublished M.A. Thesis, University of Nairobi.

Turner, R. ( ). Towards a Theory of Project Management: The Nature of the Project: *International Journal of Project Management*, (24), 1-3.

Williams, T. (2008), "A review of inventory management research in major logistics journals: themes and future directions", *International Journal of Logistics Management* (19) 2, 212-32.

Yin, R. K., (2003), *Case Study Research: Design and Methods*, (3<sup>rd</sup> edition). Sage Publications, London

Young, N. (2009). *Understanding the Research Process and Methods. An Introduction to Research Methods*. Las Vegas: Acts Press.

Zhang, Z.H. (2000). *Implementation of Total Quality Management: An Empirical Study of Chinese Manufacturing Firms*. Unpublished doctoral dissertation, University of Groningen, Groningen, Netherlands.

Zou, P. X.W., Zhang, G., and Wang, J. (2006). *Identifying key risks in construction projects: life cycle and stakeholder perspectives*. [www.ppress.net/papers/Zou\\_risks-constru](http://www.ppress.net/papers/Zou_risks-constru) Accessed 4/9/2012