INFLUENCE OF STAKEHOLDER PARTICIPATION ON COMPLETION OF WATER SUPPLY AND SANITATION PROJECTS IN INFORMAL SETTLEMENTS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT
The aim the study was to assess the influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements, Nairobi City County, Kenya. The study was guided by the following specific objectives; To determine how project communication influence completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya and to find out how project funding influence completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya. The design of this research was a descriptive research. The study used a structured questionnaire to collect data from the project managers. The collected data was analyzed using both quantitative and qualitative data analysis methods. A review of literature indicated that there was limited of research on the influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in the Kenyan context. Thus, the findings of this study served as a basis for future studies on completion of water supply and sanitation projects in informal settlements. The study has contributed to knowledge by establishing influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in the Kenyan context. A comparative study should be carried out to compare whether the findings also apply for other projects in different regions in order to validate whether the findings can be generalized in Kenya. Additionally, the study did not tie the determinants as the only factors of completion of water supply and sanitation projects in informal settlements Thus, there was need to undertake another research to examine the other factors which could be of influence on completion of water supply and sanitation projects in informal settlements.

Key Words: Project Communication, Project Funding, Water Supply & Sanitation
INTRODUCTION

Stakeholders have been defined variously as individuals essential at all points in the project from initiation to close out (Cleland 1995). Individuals or groups who have an interest or, some aspect of rights or ownership in the project and can contribute to or be impacted by the outcomes of the project (Bourne and Walker, 2006). African Development Bank (ADB, 2001) describes stakeholders as people/communities who may directly or indirectly, positively or negatively affect or be affected by the outcomes of projects or programme. Project Management Body of Knowledge (PMBOK® Third Edition) defines project stakeholders as individuals and organizations that are actively involved in the project or whose interest may be positively or negatively affected as a result of project execution or project completion.

According to Andriof & Waddock (2002) stakeholder engagement can be defined as a trust-based collaboration between individuals and/or social institutions with different objectives that can only be achieved together. Advancing sustainable development is one such goal that needs the trust-based collaborative effort of both the organizations and their stakeholders to ensure its success. Moreover, while pursuing sustainable development objectives, organizations realize that they cannot act alone to develop a sustainability report (Isenmann & Kim 2006), as organizations require the cooperation of their stakeholders to identify social and environmental issues perceived by stakeholders. Internationally, resources for social welfare services are shrinking. Population pressures, changing priorities, economic competition, and demands for greater effectiveness are all affecting the course of social welfare (Bens, 2011). The utilization of nonprofessionals through citizen involvement mechanisms to address social problems has become more common place (Kaufman & Poulin, 2011). In their modern form, the concepts of community development and community participation took shape in the 1950s (Chowdhury, 2010). From the situation in the 1950s, when community development was perceived to be synonymous with community participation, the situation has now changed to one in which there appears to be no clear understanding of the relationship between the two (Abbott, 2011). Clearly, this impacts or changes perception of what constitutes community participation and development.

Despite the good intention of the government, most of the constructed water schemes between 1970s and 1980s failed to achieve sustainability. This was due to a number of factors, among them being the practice of Supply Driven Implementation Approach (SDIA). In this approach, the government became the sole initiator, planner and provider of water service interventions. Furthermore, the system was so centralized in such a way that decisions made on water service allocations were externally oriented. The government was to carry out all operations and maintenance of village water schemes. In this context, all water works belonged to the central government. However, the outcome for this trend of affair was a lack of commitment to project beneficiaries, as far as issues of water services were concerned. Bretty (2013) conducted a study in India, and found that due to economic crisis that occurred in the same period, all Ministries were forced to reduce expenditure on recurrent costs. Therefore, water scheme operations and maintenance were seriously affected (David & Brikke, 2010).

In Africa, informal settlements are enormous, growing rapidly and underserved. By 2020 it is estimated that more than half of the people of Africa would reside in urban areas, increasing the present urban population from 300 million to 700 million. The high rates of urbanization, coupled with low rates of economic growth, suggest that this population growth would predominantly occur in the sprawling and underserved informal
settlements — where about two-thirds of the people in African cities currently live, most without access to basic water supply, sanitation and electricity services (WSP, 2010).

In Kenya, the water Act 2002 enacted in March 2003 was an attempt to recognize water as an important commodity for all. The act laid the foundation regarding governance arrangement by separating policy, regulation and service delivery. The Kenyan vision 2030 points out that, Kenya is a water-scarce country with renewable fresh water per capita at 647 m³ against the United Nations recommended minimum of 1,000 m³. Given that water is a scarce resource in the country, it raises the question of project design, planning and implementation strategies of water projects that can improve the livelihoods of the people (Kimotho, 2012).

It is therefore necessary to involve the slum dwellers in water supply and sanitation projects to realize successful implementation of such projects. Only about one-quarter of the households in Kenya’s informal settlements have access to water and a private toilet facility. Thus the majority of slum dwellers rely on shared toilet facilities. An additional 6 percent are even worse off; as they have no access to toilets and have to use open areas and/or “flying toilets” (i.e. plastic bags that are tied up and then flung away). Water service providers perceive service provision to the poor as commercially unattractive leading to informal providers who are organized in cartels, profiting from their monopoly power by distorting competition and creating artificial shortages. The rapid urbanization with its densification of population in the settlements has a particular huge and negative impact on the living conditions of the population. Therefore, although access in rural areas is lower and the proportion of the poor is higher than in the urban areas, a particular focus on the settlements of the urban poor is important and justified particularly access to water.

The Nairobi City Water and Sewerage Company is a water service provider charged with the provision of the water and sewerage services in Nairobi. Those services were previously offered by the Water and Sewage Department of the Nairobi City Council. Nairobi City Water and Sewerage Company (NCWSC) and the Athi Water Services Board have been implementing the social connections project over three years, increasing access to an estimated 80,000 low-income residents by June 2017. The Nairobi City Water and Sewerage Company has been implementing projects within Nairobi County. Some of the areas earmarked for the project include Kayole-Soweto, Matopeni-Spring Valley and Embakasi-River Bank. The subsidies would enable urban utilities and planners to focus more on the needs of poor urban households and to invest more in water and sanitation infrastructure projects within the fast-expanding informal settlements. (WB, 2011).

**Statement of the Problem**

According to the Global Water Partnership (2015) stakeholder participation is the solution to completion of water supply and sanitation projects. According to Kabudi (2005), stakeholders participation is recognized as an important component not to be neglected According to the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation report of 2004 at least 44% of the population in urban areas of sub-Saharan Africa (some 320 million people) does not have access to clean and reliable water supplies from projects installed. The UN Joint Monitoring Program estimates the failure rate of completion most water development projects in Africa at anywhere from 30% to 60%. Despite the failed completion of water development projects governments and international financial institutions continue investing hundreds of millions of dollars to keep the projects going (WB, 2006) despite evidence that they haven’t succeeded.
In Kenya about 35% of the water projects in urban areas implemented would fail due to initiation, planning, execution and closure of such projects thus don’t meet the desired goals and objectives (UNICEF, 2014). According to NTP Report (2012), 60% of the implemented water projects have been badly completed while others have not been completed though they were allocated for funds. The Value for Money Study (Price Waterhouse Coopers, 2007) says 57% of the entire water supply investment in urban areas of Kenya is unproductive, as the invested infrastructures were not functional as they are yet to be completed. The water development projects’ failures due to ineffective monitoring and evaluation systems thus far raise serious doubts about the ability of international donors to achieve lasting progress anywhere, even as institutions pour billions more dollars into global water development projects as they keep failing, resulting in loss of millions of dollar for organizations (Ochelle, 2009).

The Kenyan government and international organizations have continued to invest in the implementation of water development projects in Nairobi to assist the urban communities to alleviate the problem of water scarcity (NWSC, 2013). The completion of these projects is the major problem as they are not successful and falling out of use at an alarming rate due to lack of effective stakeholder participation in the projects (Nyamasege, 2015). Thus investment in completion of water development projects can be worth if completion rates of these projects should be increased by increasing of stakeholder participation. This study, thus sought to establish the influence of stakeholders participation on completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya.

Objectives of the study

The purpose of the study was to establish the influence of stakeholders’ participation on completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya. The specific Objectives were:

- To find out how project funding influence completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya.
- To determine how project communication influence completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Review

Stakeholder Theory

Stakeholder theory asserts that organizations should consider the concerns of individuals and groups that can affect or are affected by their activities (Gibson 2000) while making decisions and achieving organizational goals. Stakeholder theory looks at the relationships between an organization and others in its internal and external environment (Agle et al., 2007). It also looks at how these relationships affect how the organization conducts its activities (Filippone, 2012). Bourne (2009) explains that stakeholders can come from inside or outside of the organization. For instance, stakeholders of a project include customers, employees, stockholders, suppliers, contractors, non-profit community organizations, government, and the local community among many others.

The core idea of stakeholder theory is that organizations that manage their stakeholder relationships effectively would survive longer and perform better than those organizations that do not (Freeman, 1994). Hill and Jones (2012) state that stakeholder theory can be used to buy in the community trust in a project. The same view is supported by Walumbao (2011) that established that stakeholder theory provide principles in which community interests as a stakeholder are identified, analyzed and can be fulfilled. Danny (2014) opines that depending on how the community interests are identified and analyzed,
decisions can be made by a firm that help the community or at least prevent harm from coming to the community. These decisions may be to play by the rules of the game, adhere to legal contracts, or act on complaints or pressure brought to bear on the firm. Of more interest, trust is a fundamental aspect of the moral treatment of community within the organization-stakeholder relationship. Community trusts the organization to return benefit or protections from harm commensurate with their contributions or stakes (Kilpatrick, 2005). Stakeholder theory is used in this study to help demonstrate the influence of stakeholder participation on successful completion of water supply and sanitation projects.

**Theory of Development Communication**

One of the biggest ways to motivate people and make them more confident of what can be achieved is through more effective communication. (Toney & Powers, 1997 and Larkin & Larkin, 1996). Development communication refers to the use of communication to facilitate social development (International Finance Corporation, 2007). Khatri (2009) explains that development communication is founded on an idea that put the modern media of social communication at the service of development. In perspective of Chandler and McEvoy (2010), development communication seeks to elicit a human, and ultimately a social response in the people whom it seeks to serve. Development communication is an educational process (Sena, 2012). According to Steele (2008), it aims at developing social consciousness, personal responsibility towards one’s fellowmen, one’s community and country. In other words, it is a social conscience hence sensitizing the conscience. Buchholz (2013) implies development communication as respect for the human person, respect for his intelligence and his right to self-determination. Development communication help organization to engage the community as a stakeholder in educative and awareness issues and this helps to establish conducive working environment for assessing risks and opportunities and promotes information exchanges to bring about positive social change via sustainable development (Clarkson, 2005). Finlay (2006) point out that development communication technique such as information dissemination and education, behaviour change, social marketing, social mobilization, media advocacy, communication for social change and community participation has helped many organizations with community based projects to succeed even in the phase of hostility if the techniques are well used. The theory of development communication is therefore important to this study as it demonstrates the extent to which project communication influences successful completion of water supply and sanitation projects.

**Financial Distress Theory**

The financial distress theory seeks to look at the different factors that lead to a decline in a firm’s performance (Brigham & Ehrhardt, 2013). Beaver, Correia, & McNichols (2011), describe financial distress as the inability of an organization to pay its financial obligations as they mature. It is important to assess the probability of organizations financial distress because it would determine the payout distribution associated with an investment. An organizations investment decision and financing are separable and independent. However, not most organizations recognize this hence holding their balance sheets on debts and equity claims as one which then reduces their leverage on costs (Finnerty, 2013).

The financial distress theory hence shows the relationship between an organizations financial cash flow and the ability to finance its investment opportunities or projects. Each organization aiming at undertaking a projects should ensure that its financial capability has been well planned for as well as project funding opportunities well planned, communicated and prepared for before making a decision on whether to carry out a project or not. Organizations should also consider
the length of time required to release funds needed for a project or investment during the project preplanning stage before determining or agreeing on project start dates to ensure on time project funding release so as to prevent delays associated with late funds disbursements that may be influenced by several factors relating to the late release of fund. Organizations with high cost projects are supposed to be able to be able to finance these projects and when this is not possible, then projects are delayed (Correia, & McNichols, 2011). This theory is therefore important when addressing the financial factors influencing project delays. Project delivering organizations experience financial constraints either due to late funding, poor financial estimations and late release of project funds. This theory guides in the understanding of the project funding on the extent to which finances influence project delays of water supply and sanitation projects.

Conceptual Framework

![Conceptual Framework Diagram]

Independent Variables

Project Communication
- Mode of Communication
- Information systems
- Social Media

Project Funding
- Financing mechanisms
- Internal control
- Record Keeping

Completion of Water Supply and Sanitation projects
- Completion within stipulated time
- Finish within the set budget
- Finish within the project scope

Dependent Variable

Figure 1: Conceptual Framework

Project Communication
Communication is the purposeful activity of information exchange between two or more participants in order to convey or receive the intended meanings through a shared system of signs and semiotic rules. The basic steps of communication are the forming of communicative intent, message composition, message encoding, transmission of signal, reception of signal, message decoding and finally interpretation of the message by the recipient (Mary, 2013). Communication in the category of living organisms usually occurs through visual, auditory, or biochemical means. Human communication is unique for its extensive use of language (Onsongo, 2012).

Project communication is the exchange of project-specific information with the emphasis on creating understanding between the sender and the receiver (Toor and Ogunlana, 2010). Effective communication is one of the most important factors contributing to the success of a project. The project team must provide timely and accurate information to all stakeholders. Members of the project team prepare information in a variety of ways to meet the needs of project stakeholders. Team members also receive feedback from these stakeholders. Project communication includes general communication between team members but is more encompassing. It utilizes the Work Breakdown Structure (WBS) for a framework, it is customer focused, it’s limited in time, it is product focused with the end in mind, and it involves all levels of the organization.

Communication is defined as being the life blood of project management and at the same time, communication is labeled as being the main cause for project failure. “Communication breakdowns are continuously cited as one of the key reasons that projects fail (Pritchard, 2004), “At the heart of many of the top ten reasons why projects fail is poor communication (Wysocki, 2009), “Probably more errors occur in a project due to bad communications than any other cause” (Lester, 2007).

Communication is about stakeholder management and the management of expectations and perception (Maylor, 2005 Tuman, 2006). According to Schwable, managing
stakeholders involves managing communications to satisfy the needs and expectations of project stakeholders and to resolve issues. This means, presented by Schwable (2007), determining the information needs of the stakeholders, and making this information available to project stakeholders in a timely manner. By using the terminology managing communications, information needs of stakeholders, and making information available the approach reflects that communication is manageable and something transmitted to the stakeholder according to their needs a one way communication perception supporting the technical dimension of the project management process Schwalbe, 2007.

Project Funding
Although project delivery process does not have a stage called funding, budgetary constraints affect each stage of the process(Rahaman, 2011). The Right of Way to a project is not identified by a project that only fulfils the environmental process, only for the policy makers to disagree with the chosen source of funding. Kaliba et al. (2009) reviewed the correlation between cost overruns and project delays and realized that a good agreement exists between the two factors Adequate and timely funding is essential for project success. Inadequate funding and untimely funding may interfere with implementation schedule of projects. Brown, & Phua, (2011) identifies contractors’ financial difficulties as major causes of delays in government sponsored construction projects. He further defines contractors’ financial difficulties as the contractor not having sufficient funds to carry out the construction works. This includes payment for the materials, labourers’ salaries and equipment to be used for the construction work. Thornton (2007), in his survey, found that slow collection, low profit margins and insufficient capital or excessive debt are the three major causes of financial difficulties among contractors. Slow collections topped the list in the years 2007 and 2005, in which the contractor received late payment from the client. This is supported by Akinsiku, Akintola, Ameh, & Ige, (2014)who found that delay in payment from the client would eventually cause financial difficulties to the contractor. Thus, most of the construction works cannot be carried out due to these financial difficulties. El-Behary (2013) found that the owners and consultants considered financing by contractor during construction as the top cause of delay in Egyptian building projects. Aiyetan, Smallwood, & Shakantu (2011) found that contractors’ financial difficulties were the most important cause of construction delay in Nigeria. Kaliba et al. (2009) postulated that insufficient capital is one of the major causes of financial difficulties among contractors. Poor financial control by the contractor can lead to insufficient capital (Auma, 2014). Hence, the contractor would have excessive debt which causes them to face financial difficulties as they cannot pay back the debt. Mahdavinejad, & Molaei (2011) found that material shortages are due to poor materials planning, inefficient communication, unreliable suppliers and late delivery. Chirisa (2014) stated that poor planning is mistake number one in project management. This is reflected in the scenario in which poor materials planning from the contractor could lead to material shortage because the materials needed for construction may not be available within a certain time frame. This is due to mistakes in the planning stage relating to when the materials are expected to be used in the construction phase leading to project delays. Muchungu (2012) contends that financial issues, human resources conditions, site characteristics and design quality aspects to be factors influencing performance of contractors on construction projects.

Completion of Water Supply and Sanitation Projects
Project management is the discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives. It is often closely
related to and sometimes conflated with program management. A project is a temporary endeavour, having a defined beginning and end (usually constrained by date, but can be by funding or deliverables), undertaken to meet particular goals and objectives, usually to bring about beneficial change or added value. The temporary nature of projects stands in contrast to business as usual (or operations), which are repetitive, permanent or semi-permanent functional work to produce products or services (Mwesigye, 2011).

According to Toor and Ogunlana (2010) project success means different things to different stakeholders. Researchers have traditionally used the iron triangle (measures of time, cost and quality) as the basis for project success (Bryde 2008) indicated that managers must understand the timeframe of the projects, the different dimensions of the project success factors and the project types when evaluating project success as a whole. Based on practical examples and a literature review, Shenhar et al. (2011) also indicated that time delays, cost overruns and financial performance were important factors for project success. Cooke-Davies (2012) recognized factors that correlated with time performance and cost performance. Factors that deal with time performance were connected to the risks, documentation responsibilities and project duration, while factors that deal with cost performance were connected to changes during the project and integrity of measurement (Cooke-Davies 2012). Toor and Ogunlana (2010) also indicated that the project execution period is important for project success. Quality was one part of the iron triangle, and system and information quality are examples of quality dimensions in the project (Atkinson 2009).

Ahmad and Schroeder, (2011) stated that project Completion is a key indicator for the level of performance a company is able to provide correct and in-time deliveries to its customers. It is a quantitative measure to benchmark an organization against, when it comes to translate project management and performance. Archer, (2006) defines successful project as “Controlling process that ensures that project objectives are met by monitoring and measuring progress regularly to identify variances from Plan, so that corrective action can be taken when necessary” and further identifies controlling process to have links with planning and executing process. Also, Weil, (2005) mentions controlling as a three step process thus measuring progress, evaluating what remains to be done, and corrective action to achieve or exceed the objectives. While, Mitnick, (2005) quotes “The performance monitoring subsystem is charged with observing the transformation process and reporting deviations from the expectations to the decision making subsystem so that it can initiate corrective action where necessary” Jackson (2008) mentions “In project management, control is based on a comparison of baseline plans and contracts with actual events, and deciding what to do (re-planning) when the two do not match” as cited in (Gardiner 2005). Also, Ross, (2008) mentions that the three gorges project cost was perfectly controlled within the approved budget as cited in Shandler, (2006). So, in practice, it is possible to achieve perfect control of the project.

Empirical Review

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.

**Project Funding**

Ondari,(2013) carried out a study on the factors influencing the construction of government road projects in Kenya and he concluded that the Ministry lacks the necessary supervising engineering staff required to implement projects. Further Government procedures for disbursement of funds are beauracracic and thus most projects once approved by parliament await a longer period before actual release of funds is undertaken though the current study disputes on availability of financial resources and equipments. Aridity, (2002), stated that cost overrun is a major problem in both developed and developing countries. Several studies of major projects show that cost overruns are common. The causes of cost overrun in construction projects are varied, some are not only hard to predict but also difficult to manage. The inherent contractors experience during preparation, planning, authorization and evaluation procedures for large infrastructure projects creates obstacles to the implementation of such projects (Commission of the European Union, 2008). There is a fear that obstacles in the planning and implementation phases translate into cost escalation, if they do not block projects altogether (Ardity et al, 2009).

Adan (2012) conducted a study on the influence of stakeholders’ role on performance of constituencies’ development fund projects a case of Isiolo North Constituency; Onchoke (2013) study on factors influencing performance of community development projects in Kenya; and Ondieki (2011) did a study on factors influencing stakeholders’ participation in monitoring and evaluation of Local Authority transfer fund projects in Kisii municipality. The studies established that the common challenges that affected successful completion of the projects included; project cost overruns, procurement practices, political goodwou and external factors.

**Stakeholder Participation**

Wouldiam, (2008), in his study found that stakeholder’s participation in water resources management has not been effectively implemented in the past and even identification and categorization of stakeholders has not been carried out in most parts of the country. The ministry of water has usually been implementing activities without adequate involvement and participation of stakeholders including local communities in planning, management and decision making at all levels on issues related to water resources. Asaduzzaman, (2008), found that people’s participation in development projects is still an ‘elusive golden deer’ that the nation sought persistently but could not find during the last three decades or more. His study however, emphasized that clientelism which is a direct product of the undemocratic political culture of Bangladesh, is a major threat to people’s participation in local development programs /projects. In addition, the study also identifies political reluctance and bureaucratic resistance as major challenges to people’s participation in development intervention in Bangladesh.

Akinbile, Oladoja, Awoniyi & Adisa, (2006), discovered the community involvement level in the project implementation in Nigeria: The water projects assessed are the deep wells, boreholes and pipe borne water in the selected communities. Solely government either executed...
the projects, or by the people themselves, or through cooperation of government and the people. He discovered that 70% of the respondents saw the projects as felt need in the community. Majority of the respondents (60%) were also involved in sharing the idea of the water project among community members. This is an indication that water problem is a real felt need among communities in the study area. Most of the respondents indicated that they were not involved in decision-making during the project planning and implementation. It has been established that ordinary community members are usually not involved in project decision-making. The respondents were more involved in fund generation for the water project, sharing the ideas of the project with other members of the community as well as seeing the project as a felt need within the community.

RESEARCH METHODOLOGY

The study adopted a descriptive survey design. The target population comprised of 120 water supply and sanitation projects in informal settlements in Nairobi City County. The unit of analysis was water supply and sanitation project implemented by the Nairobi City Water and Sewerage Company. The study adopted a census technique.

The study used questionnaire as the research instrument. The study also undertook desk review of existing information about the study areas and collected quantitative data from respondents who are conversant with the subject through various interactions or experiences. Data collected was analyzed using quantitative and qualitative methods with the help of SPSS and excel.

DATA ANALYSIS, PRESENTATIONS AND DISCUSSIONS

The study targeted a population of 120 respondents from which 80 filled in and then returned questionnaires were received making a response rate of 66.67%.

The respondents were requested to indicate their gender in order to establish if there was gender balance in the positions indicated. The findings indicated that majority (60%) were female respondents while (40%) were male respondents. This shows that there were more female employees in the water sector than there are male. The staff mix however shows that gender distribution in the water sector is in line with the requirements of Kenyan constitution (2010) which requires that no one gender should take up more than two thirds of employment positions in public institutions. Data on the respondent’s age distribution found out that most of the respondents (40%) were aged between 26 to 35 years, 25 % of the respondents 36 to 45 years, 15% were aged over 51 years, 12% were aged 46 to 50 years while 8% of the respondents were aged 18 to 25 years. This implied that participants were well distributed in terms of their age and that respondents all ages were represented during the study. From the study findings majority (50%) indicated that they had diploma certificates, followed by those who indicated that they had university degree at (35%) with few (15%) indicating that they had master’s degree qualification while 10% indicated they had certificate level of qualification and this implies that respondents were well educated and that they were in a position to respond to research questions with ease. The study determined the number years of the respondents had worked in the projects. From the findings, majority of the respondents had worked in the projects for less than 5 years representing 32%, 24% of the respondents stated that they had worked for the projects between 6-10 years, 27% of the respondents stated that they had worked for the projects between 11-15 years and 16% of the respondents stated that they had worked for the projects over 15 years. This indicated that the respondents had worked for a long period thus the study could gather the necessary information sought by the study.
Project Communication

The study sought to establish the extent to which respondents agreed with the statements on project communication in relation to completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya. A scale of 1-5 was used. The scores “Very Small Extent” and “Small Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale (1 ≤ small extent ≤ 2.5). The scores of ‘Moderate Extent’ were represented by a score equivalent to 2.6 to 3.5 on the Likert scale (2.6 ≤ moderate extent ≤ 3.5). The score of “Great Extent” and “Very Great Extent” were represented by a mean score equivalent to 3.6 to 5.0 on the Likert Scale (3.6 ≤ great extent ≤ 5.0). The results were presented in mean and standard deviation. The mean was generated from SPSS and is as illustrated in Table 1.

From the results, majority indicated to a small extent that the project team had experience in interpretation of working drawings as shown by a mean of 3.219; the poor and distorted information slow down project completion and lead to extra cost as shown by a mean of 2.876; the unclear channels of communication had slowed and culminated delay in project completion as shown by a mean of 3.543; they did regular site meetings between the consultants and contractors as shown by a mean of 4.765; There was regular review and adjustment of communication report as shown by a mean of 3.760; There were regular annual reports as shown by a mean of 3.870; There was information on work breakdown structure necessary for division of labour as shown by a mean of 2.987. The study findings corroborated with literature review by Heldga (2008) confirmed that project communication was very important for the successful implementation of projects. 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 was presented. Communication was a key issue for successful project implementation and management.

Table 1: Project Communication In Relation To Completion Of Water Supply and Sanitation Projects

<table>
<thead>
<tr>
<th>Statement</th>
<th>VGE</th>
<th>GE</th>
<th>ME</th>
<th>SE</th>
<th>VSE</th>
<th>MEAN</th>
<th>STD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The project team has experience in interpretation of working drawings</td>
<td>6%</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
<td>70%</td>
<td>3.219</td>
<td>.552</td>
</tr>
<tr>
<td>The poor and distorted information slow down project completion and lead to extra cost</td>
<td>12%</td>
<td>8%</td>
<td>4%</td>
<td>67%</td>
<td>9%</td>
<td>2.876</td>
<td>.629</td>
</tr>
<tr>
<td>The unclear channels of communication has slowed and culminated delay in project completion</td>
<td>6%</td>
<td>13%</td>
<td>3%</td>
<td>10%</td>
<td>68%</td>
<td>3.543</td>
<td>.411</td>
</tr>
<tr>
<td>We do regular site meetings between the consultants and contractors</td>
<td>10%</td>
<td>7%</td>
<td>2%</td>
<td>9%</td>
<td>72%</td>
<td>2.654</td>
<td>.599</td>
</tr>
<tr>
<td>There is regular review and adjustment of communication report</td>
<td>72%</td>
<td>10%</td>
<td>8%</td>
<td>4%</td>
<td>6%</td>
<td>4.765</td>
<td>.698</td>
</tr>
<tr>
<td>There are regular annual reports</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
<td>9%</td>
<td>73%</td>
<td>3.870</td>
<td>.723</td>
</tr>
</tbody>
</table>
Project Funding

The study sought to establish the extent to which respondents agreed with the statements on project funding in relation to completion of water supply and sanitation projects in informal settlements in Nairobi City County, Kenya. A scale of 1-5 was used. The scores “Very Small Extent” and “Small Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale (1 ≤ small extent ≤ 2.5). The scores of ‘Moderate Extent’ were represented by a score equivalent to 2.6 to 3.5 on the Likert scale (2.6 ≤ moderate extent ≤ 3.5). The score of “Great Extent” and “Very Great Extent” were represented by a mean score equivalent to 3.6 to 5.0 on the Likert Scale (3.6 ≤ great extent ≤ 5.0). The results were presented in mean and standard deviation. The mean was generated from SPSS and is as illustrated in Table 2.

From the research findings, majority of the employees indicated that there was adequate financing mechanisms in your project as shown by a mean of 3.568; the project financing mechanisms reduce cost overruns as shown by a mean of 3.872; there are effective internal controls on the cost overruns as shown by a mean of 3.287; there is adequate record keeping on control of capital to run projects as shown by a mean of 2.987; the record keeping control capital invested in the projects as shown by mean of 2.848; the project personnel take care of the available financial resources as shown by 3.110; there is adequate financial plans to control project funds for the project as shown by a mean of 2.861. The study findings are in agreement with the findings of Aiyetan, Smallwood, & Shakantu (2011) found that contractors’ financial difficulties were the most important cause of construction delay in Nigeria. Kaliba et al. (2009) postulated that insufficient capital is one of the major causes of financial difficulties among contractors. Poor financial control by the contractor can lead to insufficient capital (Auma, 2014). Hence, the contractor would have excessive debt which causes them to face financial difficulties as they cannot pay back the debt.

Mahdavinejad, & Molaei (2011) found that financial shortages are due to poor materials planning, inefficient communication, unreliable suppliers and late delivery. Chirisa (2014) stated that poor financial planning is mistake number one in project management. This is reflected in the scenario in which poor materials planning from the contractor could lead to material shortage because the materials needed for construction may not be available within a certain time frame. He contends that financial issues to be factors influencing performance of contractors of government funded building projects

<table>
<thead>
<tr>
<th>Statement</th>
<th>VGE</th>
<th>GE</th>
<th>ME</th>
<th>SE</th>
<th>VSE</th>
<th>MEAN</th>
<th>STD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there adequate financing mechanisms in your project?</td>
<td>6%</td>
<td>74%</td>
<td>8%</td>
<td>6%</td>
<td>6%</td>
<td>3.568</td>
<td>.873</td>
</tr>
<tr>
<td>How do the project financing mechanisms reduce cost overruns?</td>
<td>5%</td>
<td>11%</td>
<td>70%</td>
<td>6%</td>
<td>9%</td>
<td>3.872</td>
<td>.982</td>
</tr>
</tbody>
</table>
How effective are the internal controls on the cost overruns?  
68% 6% 9% 6% 11% 3.287 .445

Do you have adequate record keeping on control of capital to run projects  
18% 16% 58% 5% 13% 2.987 .360

How does record keeping control capital invested in the projects?  
6% 6% 9% 72% 7% 2.848 .328

Do the project personnel take care of the available financial resources?  
11% 70% 10% 12% 8% 3.110 .653

Do you adequate financial plans to control project funds for the project?  
8% 6% 8% 5% 73% 2.861 .820

Completion of Water Supply and Sanitation Projects in informal Settlements  
On the extent to which completion of projects in the study area in terms of finish in time, within budget and scope. The data was collected from the different indicators of the variable completion of projects which was ordinal categorical. The data was therefore presented in frequency tables with the median being used as the appropriate measure of central tendency. The results were presented in Table 3. The first indicator for the dependent variable required to know what the project’s completion in terms of finished within time was, 5% of the respondents had 0% , 35% had less than 10%, 20% stated 21-30%, 15% indicated 31-40%, 15% posited 31-40%, 10% indicated over 40% The mode was found to be 2 which imply that on average the most of the project’s completion in time is less than 10%. The next indicator required the respondents to state level of completion of projects within budget, 25% of the respondents had 0% , 45% had less than 10%, 10% stated 20-30% , 5% indicated 30-40% , 5% posited 31-40%, 15% indicated over 40% The mode was found to be 2 which imply that on average the most of the project’s completion within budget is less than 10%. When the respondents were asked what the level of completion of projects within scope was, 20% of the respondents had 0%, 55% had less than 10%, 15% stated 20-30%, 5% indicated 30-40%, 5% posited 31-40%, 0% indicated over 40%. The mode was found to be 2 which imply that on average the most of the project’s completion within scope is less than 10%.

Table 3: Completion of Projects

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>Less than 10%</th>
<th>10-20%</th>
<th>21-30%</th>
<th>31-40%</th>
<th>Above 40%</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish in Time</td>
<td>5%</td>
<td>35%</td>
<td>20%</td>
<td>15%</td>
<td>15%</td>
<td>10%</td>
<td>2</td>
</tr>
<tr>
<td>Within Budget</td>
<td>25%</td>
<td>45%</td>
<td>10%</td>
<td>0%</td>
<td>5%</td>
<td>15%</td>
<td>2</td>
</tr>
<tr>
<td>Within Scope</td>
<td>20%</td>
<td>55%</td>
<td>15%</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>2</td>
</tr>
</tbody>
</table>

SUMMARY, CONCLUSION AND RECOMMENDATIONS  
This study aimed at establishing the influence of project funding and project communication in Nairobi City County, Kenya.  
On project communication, majority indicated to a small extent that the project team had experience in interpretation of working drawings. The poor and distorted information slow down project completion and lead to extra cost. The unclear channels of communication had slowed and culminated delay in project completion. They do regular site meetings between the consultants and contractors. There was regular review and adjustment of communication report and there are regular annual reports. There was information
on work breakdown structure necessary for division of labour.

On project communication, majority indicated to a small extent that the project communication had experience in interpretation of working drawings. The poor and distorted information slow down project completion and lead to extra cost. The unclear channels of communication has slowed and culminated delay in project completion. To a small extent they do regular site meetings between the consultants and contractor. There is regular review and adjustment of communication report. There are regular annual reports and there is information on work breakdown structure necessary for division of labour.

On completion of water supply and sanitation projects, the study sought to examine the influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in Nairobi City County, attributed to the influence of funding and project communication. Finish of the projects within time further recorded a slow positive completion. Finish of the projects within scope also recorded a slow positive implementation. From inferential statistics, a positive correlation was seen between each determinant variable and completion of water supply and sanitation projects in informal settlements. The strongest correlation was established to be project funding. 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 completion of water supply and sanitation projects in informal settlements in Kenya was affected by the independent variables. The project funding followed by project communication were the major factors that mostly affected completion of water supply and sanitation projects in informal settlements in Kenya.

The study concluded that project funding was the first important factor that influenced completion of water supply and sanitation projects in informal settlements in Kenya. Project funding had a significant influence on completion of water supply and sanitation projects in informal settlements in Kenya. This implied that increasing levels of project funding would affect the levels of completion of water supply and sanitation projects in informal settlements in Kenya. This showed that project funding affected completion of water supply and sanitation projects in informal settlements in Kenya.

Finally, the study concludes that project communication was the second important factor that influenced completion of water supply and sanitation projects in informal settlements in Kenya. The regression coefficients of the study showed that project communication had a significant influence on completion of water supply and sanitation projects in informal settlements in Kenya. This implied that increasing levels of project communication would affect the levels of completion of water supply and sanitation projects in informal settlements in Kenya. This showed that project communication influenced completion of water supply and sanitation projects in informal settlements in Kenya.

Recommendation of the Study

The study explored the influence of stakeholder participation on completion of water and supply and sanitation projects in informal settlements in Nairobi City County. Based on the findings, the following recommendations were made which the county government of Nairobi’s, other county governments and even the national government should put in place to address these issues if
Kenya is to achieve its vision 2030 plans on the health sector.

On project communication, there was 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 completion of the projects.

There was need to ensure that there was adequate project financing to enhance completion of the government construction projects in time. This would reduce budgetary constraints, cost overruns, reduces interference with implementation of the project schedule, and reduces insufficient capital to run project activities. The internal controls and record keeping are important to boost completion of government projects.

Recommendations for Further Studies

A review of literature indicated that there was limited of research on the influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in the Kenyan context. Thus, the findings of this study served as a basis for future studies on completion of water supply and sanitation projects in informal settlements. The effects of determinants of completion of water supply and sanitation projects in informal settlements have not been widely studied which presents gaps in African and Kenyan contexts. The study has contributed to knowledge by establishing influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in the Kenyan context.

This study confined itself to influence of stakeholder participation on completion of water supply and sanitation projects in informal settlements in the Nairobi City County. A comparative study should be carried out to compare whether the findings also apply for other projects in different regions in order to validate whether the findings can be generalized in Kenya. Additionally, the study did not tie the determinants as the only factors of completion of water supply and sanitation projects in informal settlements. Thus, there is need to undertake another research to examine the other factors which could be of influence on completion of water supply and sanitation projects in informal settlements.

REFERENCES


