

EFFECT OF RESOURCE AVAILABILITY ON PERFORMANCE OF WATER PROJECTS FUNDED BY CONSTITUENCY DEVELOPMENT FUND IN NYERI COUNTY, KENYA

Margaret Nyambura Rugiri

Master of Business Administration (Management Science), Kenyatta University,
Kenya

Dr. John Mungai Njangiru

Lecturer, Department of Accounting and Finance, Kenyatta University, Kenya

©2018

**International Academic Journal of Information Sciences and Project Management
(IAJISPM) | ISSN 2519-7711**

Received: 23rd October 2018

Accepted: 29th October 2018

Full Length Research

Available Online at:

http://www.iajournals.org/articles/iajispm_v3_i2_378_393.pdf

Citation: Rugiri, M. N. & Njangiru, J. M. (2018). Effect of resource availability on performance of water projects funded by constituency development fund in Nyeri County, Kenya. *International Academic Journal of Information Sciences and Project Management*, 3(2), 378-393

ABSTRACT

The current study sought to determine the effect of resource availability as a facet of project monitoring and evaluation on the performance of CDF funded water projects in Nyeri County of Kenya. The study employed a descriptive research design and relied on a target population of 86 water projects identified to have been funded by CDF in Nyeri County as gathered from the National Government Constituency Development Fund Board. The researcher employed a stratified random sampling technique to select 60 respondents comprising of the project managers assigned to the water projects. Primary data was gathered using questionnaires which were administered using the drop and pick method. The questionnaires were tested for validity and reliability using a pilot study and Cronbach's Alpha Reliability Test. Both descriptive and inferential statistics

(regression and correlation analysis) were applied for useful conclusions while both bivariate and multivariate methods were utilized. Regression analysis results further demonstrated resource availability was a useful predictor of project performance. Pearson correlation analysis results demonstrated that resource availability was positively associated with project performance. The study recommended that the project management teams device ways to improve the schedule performance of water projects which was found to be unsatisfactory. A further recommendation was made on need for legislative authorities to increase statutory allocation for monitoring and evaluation exercise that would help enhance performance of projects.

Key Words: *project performance, monitoring and evaluation, national government constituency development fund*

INTRODUCTION

Project performance has remained a matter of principal concern especially for the public sector in Kenya. The concept interests a wide range of stakeholders who include the government, donors, project teams, citizens, regulatory authorities and activists. With the inauguration of Kenya's New Constitution of 2010, the public understand their rights better and as such there is more activism in quest for accountability, efficiency and integrity in the management of taxpayers' resources. The Government of Kenya has since independence attempted to introduce a number of decentralised project initiatives not only towards driving economic growth and development but also ensuring equity in the distribution of resources. Most of these initiatives have however failed to mainly due to inadequate involvement of key stakeholders, poor planning and inadequate monitoring and evaluation.

One such initiative was the District Focus for Rural Development (DFRD) introduced in 1983 which sought to enhance geographical equity by allocating development funds to less developed districts. DFRD collapsed shortly after mainly due to poor project monitoring and evaluation

framework as this was the prerogative of the government in isolation. There was usually little or no participation of key stakeholders in the project (Otieno, 2007). Water is recognised as a basic human right and is a tool for survival of humanity. This informs why the Constituency Development Fund has financed initiatives towards projects that support solutions towards the water problem in Kenya. Over the past one decade, water scarcity has emerged as one of the most critical aspects on the socio-economic future of the world. The United Nations presents evidence to indicate that by 2025 nearly 1.4 billion people which represents almost a quarter of the world's population or a third of the population in developing countries are destined to face absolute water scarcity (Rijsberman, 2006).

Oginga and Onjala (2002) and Wacheke (2006) in a review of a United Nations (UN) report on climate variability and water resources degradation in Kenya categorises Kenya with nations with the lowest water replenishment rates in the world. The report further alerts that the country's water resources are still very poorly managed and that 50% of the population lack safe reliable water and basic sanitation. The Constituency Development Fund has been resourceful in finding a solution to the tethering water problem and has financed tens of thousands of Water Projects in its objective towards poverty alienation.

Project Monitoring and evaluation (M&E) according to Burke (2013) entails the process of assessing and continuously improving the performance of projects towards an objective achievement of desired results. Project monitoring and evaluation seeks to enhance both current and future management of outputs, outcomes and impact. Project Monitoring and Evaluation is an integral part of the project life cycle and seeks to assure stakeholders that all is going on as desired with regard to the project undertakings. According to Prennushi, Rubio, and Subbarao (2002), though used together, the two terms, Monitoring and Evaluation are different in concept. Project evaluation involves a systematic and objective examination of the relevance, effectiveness, efficiency and impact of project activities as compared to a set of pre-specified objectives. Evaluation of projects seeks to detect errors and ensuring they don't recur and also integrates tools to ensure success, effectiveness and efficiency of current and future projects. the output of an evaluation exercise include recommendations and lessons to the project managers or other interested parties as well as implementation teams for purposes of regular update, reconciliation and correction of activities, tools, processes, procedures and standards.

Evaluation also seeks to ensure transparency and accountability in the implementation of projects (Rossi, Lipsey, and Freeman, 2003). On the other hand, Project Monitoring involves a continuous assessment of project undertakings and comprises of continuous oversight of the activity's implementation stage. The whole idea behind project monitoring is the determination of whether the outputs, deliveries and schedules planned have been reached so that action can be taken to correct the deficiencies as quickly as possible (Crawford & Bryce, 2003). Turner (2014) asserts that resource availability is always at the core of any successful project undertaking and its integral activities. The conduct of Monitoring and evaluation exercises for CDF Projects requires adequate resources to ensure smooth and objective process.

Available resources are the assets that an organisation has and can access and utilise in its operations which include human resources, financial resources, materials and equipment (Cleland & Ireland, 1994). Resource Planning is vital to ensure the success of M&E exercises and also ensures a result based approach within minimal constraints. Resource planning has been described by Burke (2013) as a detailed summary of all types of resources required to complete a specific task. As gathered from the National Government Constituency Development Fund (2016), the board avails resources based on Constituency Proposals for funds to cater for M&E activities. However, the board reserves the right to review the amount of funds requested to the various projects. The study at hand sought to determine if the resource availability for M&E purposes affects the performance of CDF Water projects.

Project Performance is a critical subject not only for project managers and the financiers but also for the entire league of stakeholders. Performance Measurement is critical since it provides an assessment of the accountability and transparency status of the project. It also justifies the project costs and an assessment on the extent to which the project objectives are being met. A number of approaches have been suggested as effective tools of measuring the performance of projects. The approaches most commonly used include the Triple Constraints Methodology and the Project Management Diamond Approach. The Triple Constraints Methodology, also referred to as the Project Management Triangle or the Iron Triangle has been applied to measure performance in a wide range of public and Private sector projects (Anbari, Carayannis, and Voetsch, 2008). The three constraints are time, cost and quality. Time is an important factor to consider in project performance measurement as the activities of a particular project can either take shorter or longer amount of time to complete. Time is an important project resource that needs to be budgeted for and utilised wisely as failure to meet the deadlines in a project often creates adverse effects.

Cost is another critical dimension of project performance. It is important for projects to stick to the budget unless it is for very special reasons. It's fundamental for project managers and the organization as a whole to have an estimated cost when undertaking a project. Budgets serve to check for possible abuses and ensure that project is developed or implemented below a certain cost. Scope concerns the actual outcome of the project undertaken and consists of a list of deliverables, which need to be addressed by the project team. Project managers should know how to manage both the scope of the project and any change to that effect which impacts on time and cost (Rosenau and Githens, 2011). Though quality is not a part of the Triple Constraints Methodology, it is always the ultimate objective of every deliverable in the project. As such project time and cost savings as well as the achieved project deliverables (scope) should not come as a sacrifice on the quality of the project. As such, the Triple Constraints Methodology always assumes quality in the performance assessment and any shortcoming on this variable would mean poor performance. High cost does not always mean high quality but using substandard materials to lower project costs does not also serve the idea of saving the inputs and falls short of ideal project performance (Anbari, 2008).

The project Management Diamond has been presented more recently by Shenhar and Dvir (2007) as an improvement on the Triple Constraints Methodology. The model acknowledges Quality as a key parameter to measure alongside Scope, Cost and time and also makes an assumption that consume and stakeholder's expectations are being met. Like the Project Management Triangle, the Diamond Approach asserts that successful projects must be delivered within cost and delivered on time. They must also meet the agreed scope and meet the quality standards agreed upon. The model then assumes that the cost, quality, time and scope achievements are in line with customer expectations (Schwalbe, 2008). The Project Diamond uses Customer expectations as the central theme while the Triple Constraints Method uses quality as the main theme as indicated in the figures 1.1 and 1.2 respectively.

The Constituency Development Fund (CDF) was introduced in 2003 through the CDF Act of 2003 as a tool to support constituency-level, grass-root development projects. The fund was designed to address quest for equitable distribution of development resources across regions and checking regional development imbalances. The fund's main goal was to help in poverty alienation through constituency-level development projects. The Constituency Development Fund was designed to complement other existing funds directed to the community. These funds include the Local Authorities' Transfer Fund (LATF), Bursary Fund, Fuel Levy Funds and Roads Maintenance Fund as gathered from the CDF Act of 2003, CDF Act 2013 and CDF Act of 2015. The CDF Act of 2003 and as amended in 2013 and 2015 provides that the government shall set aside at least 2.5% of its ordinary revenue for disbursement under the CDF program. 75% of the total allocation to the CDF Kitty is then shared or allocated equitably between Kenya's 210 constituencies with the remaining 25% of the allocation to the Kitty shared based on a poverty index to cater for poorer constituencies.

The CDF Act of 2003 put the responsibility of the CDF Fund Management at the national level on the Constituency Development Fund Board (CDFB) which was later renamed following the 2013's and 2015's amendment to the National Government Constituency Development Fund (NG-CDFB). The NG-CDFB is mandated to ensure that there is efficient and effective administration of the Fund. The board is mandated to put measures and precise frameworks to ensure that the Fund achieves its objectives and doesn't collapse like its predecessor funds such as the District Focus for Rural Development (DFRD) which failed due to open abuses and lack of a participatory approach in management (Otieno ,2007).

A total of 86 Water Projects were identified to have been funded by the CDF in the county. The comprehensive list of water projects per constituency is available under appendix IV. Performance concerns have however been raised by stakeholders who include the members of public through social audits on the extent the water projects have met the stakeholders expectations. The Kenya National Audit Report of 2012 for instance raised serious performance concerns with regard to water projects in Mathira Constituency. Similar concerns have been raised for other constituencies including Mukurewini and Kieni Constituencies. There has also

been issues with time, cost and quality of work raised by the stakeholders (Ngacho and Das, 2014).

STATEMENT OF THE PROBLEM

Previous attempts by the Government of Kenya to introduce successful decentralised development funds have failed in the past. Such stalled action plans and initiatives include the District Focus for Rural Development (DFRD) introduced in 1983 seeking to take development closer to the people and deal with regional development inequities. However, the program failed mainly due to poor Monitoring and Evaluation of the projects that left them prone to abuse from implementers (Otieno, 2007). Two decades after, the Constituency Development Fund was introduced in 2003 with a view to solve the very challenges that predecessor funds fell short of achieving. CDF has not been spared either with questions being raised on poor project performance levels in some constituencies as well as embezzlement of funds by the management and project teams. This factor has led to quite a number of constituencies having their accounts frozen for investigations regarding misappropriations. Conscious of the need for a better working framework, the National Government Constituency Development Fund (NG-CDFB) has structures that aim to achieve a participatory model of monitoring and evaluation to ensure that project resources and undertakings are closely monitored (Gikonyo, 2009). The action plans notwithstanding, the CDF Water projects' performance have been an item of key concern among stakeholders. For instance, the Kenya National Audit Report of 2012 for Mathira Constituency which is one of the Constituencies targeted raised glaring project management issues with regard to the handling of water projects in the constituency. Kamau and Mohamed (2015) undertook a study on efficacy of Monitoring and Evaluation function in achieving Project Success in Kenya. The study however relied solely on existing literature and past empirical studies establishing a positive influence of project monitoring and evaluation on project performance indicated by time (schedule), cost (budget), technical requirements and user satisfaction indicators. The study however presents a methodological gap on the need to expand the framework of indicators of project performance to cover also quality and scope indicators. An empirical gap is also encountered on the need to consider an empirical study as a critique of existing literature. Kimweli (2013) examined the role of Monitoring and Evaluation Practices on the Success of Donor Funded Food Security Intervention Projects in Kibwezi District of Kenya. Study findings revealed below average levels of community participation in monitoring and evaluation of food security projects. The study however exposes an empirical gaps on the need to expand the model to cover also resource availability as a facet of monitoring and evaluation. Waithera and Wanyoike (2015) conducted a study on the influence of Project Monitoring and Evaluation on Performance of Youth Funded Agribusiness Projects in Bahati Sub-County, Nakuru, Kenya. Makori and Wanyoike (2013) assessed the effects of Result Based Monitoring and Evaluation on Performance of Donor Funded Value Chain Projects in Kenya. Oluoch (2014) conducted a study on determinants of effective monitoring and evaluation systems through a case study of national youth service empowerment projects (Nairobi region). The three studies above present an

empirical gaps on the need to assess resource availability and its effect on project performance. Barasa (2014) undertook a study on influence of monitoring and evaluation on project completion in Kenya with an interest in CDF projects in Kakamega County of Kenya. The study exposes a methodological gap on the need to shift from the subjective to objective measures of performance. It was evident from the ongoing discussion that though studies had been done on the subject at hand, they had not adequately dealt with key gaps. The gaps included methodological gaps, empirical gaps and contextual gaps. Methodological gaps were singled out in that most studies had not embraced an exhaustive framework for measuring project performance and had relied on majorly cost and schedule measures leaving other factors underutilised. Empirical gaps were also identified on the need to consider more monitoring and evaluation factors for assessment such as resource availability. Most studies had embraced a narrow dimension of M&E issues for assessment. The study therefore sought to determine the effect of resource availability as a facet of monitoring and evaluation on performance of CDF Water projects in Nyeri County, Kenya.

OBJECTIVE OF THE STUDY

The general objective of this study was to establish the effect of Monitoring and Evaluation on Performance of Water Projects funded by the Constituency Development Fund in Nyeri County, Kenya.

RESEARCH HYPOTHESIS

H₀₁: Resource Availability does not have a significant effect on the performance of CDF funded Water Projects in Nyeri County, Kenya.

THEORETICAL REVIEW

Outcome Mapping (OM) Theory

The Outcome mapping (OM) as presented by Earl, Carden, and Smutylo (2001) has been exploited as a useful methodology for planning, monitoring and evaluating development initiatives that seeks to deliver sustainable social change. With regard to project monitoring and evaluation, the Outcome Mapping Methodology seeks to determine the outcomes or what is often referred to as the 'black box' of results that emerge downstream from the a particular project initiative's activities but upstream from longer-term economic and environmental transformations. Jones & Hearn (2009) posit that during the planning stage, outcome mapping helps a project team to specify the targeted actors, the deliverables and changes hoped for at completion as well as the ideal strategies for these achievements. For purposes of monitoring which is an ongoing process, the model suggests a set of tools to design as well as collecting information on the results of the change process. OM is also critical to project evaluation as it

provides a framework for collecting information on immediate project milestones, contributions or hitches and allows for credible assessment of the initiative's contribution to results.

Smutylo (2005) assert that users of the theoretical framework should understand and acknowledge the role of skilled facilitation in addition to a dedicated budget and time in ensuring success of its application. With this understanding, the theory was a critical yardstick for the study at hand as it will guide the objectives of staff training and its effect on project performance. The theory underlines the critical role of staff skills and competencies in ensuring that monitoring and evaluation of projects is done in a manner that influences the attainment of project objectives (Shrnhur, Levy and Dvir, 1997). According to Jones and Hearn (2009), the theoretical perspective also emphasises the important role of time, human and financial resources for successful monitoring and evaluation programs. As such, the model was also critical in the assessment of the influence of resource availability on the performance of CDF Water projects in Nyeri County.

Logical Framework Analysis (LFA)

According to Ramani (2006), the Logical Framework Analysis provides a summary of why the project is being undertaken, the desired project outcomes, how to achieve the project outcomes, the external factors critical for the success of the project, which means are required and finally the anticipated costs of the project. This information is critical for project monitoring and evaluation exercises and provides a useful benchmark for assessing the extent to which project objectives are being achieved. The Logical framework presents an evaluation model that considers the purpose, outcomes, outputs and activities of the project at hand indicating clearly the indicators and targets for each, the means of verification as well as the critical project assumptions and risks (Jackson, 1997).

The Logical Framework is presented in the form of a four-by-four table of events during project implementation and has the Activities, Outputs, Purpose and Goal on the rows and information about these events on the columns i.e. Narrative description, Objectively Verifiable Indicators (OVIs), Means of Verification (MoV), and Assumptions (Ramani, 2006). The Logical framework Analysis will be critical especially with regard to an objective assessment of project performance which is the main subject of the study at hand. The model was useful in offering an objective assessment of the relative influence of resource availability as a facet of monitoring and evaluation on the performance of the CDF Water projects in Nyeri County.

EMPIRICAL LITERATURE REVIEW

Onchoke (2013) undertook a study on Factors influencing performance of community development projects in Kenya in a case study of Kisii Central District. Financial Resources and More specifically the Sources of finance was one of the factors considered for assessment. The study measured Project performance using the triple constraints methodology that considers

time, budget and scope indicators. The study utilised stratified random sampling and exploited both primary and secondary data resources. Both descriptive and inferential statistics were employed for purposes of data analysis. Sources of finance was found to yield statistically significant influence on performance indicated through the triple constraints methodology: time, scope and budget based performance.

Meri (2013) undertook a study on the determinants of effective monitoring and evaluation systems for non-profit projects through a case study of international Non-Governmental Organizations projects in Nairobi. The study sought to establish the influence of among others project's technical capacity on the effectiveness of monitoring and evaluation systems. Technical capacity was defined to include financial resources, human resources and their unique abilities as well as material resources and capacity for M&E. The researcher employed random sampling techniques to arrive at a sample size of 73 non-profit projects drawn from a target population of 146 projects. Data was gathered from project managers or project monitoring and evaluation officers where applicable using questionnaires and analysed using SPSS software. The study results indicated that Project's Technical Capacity influences the effectiveness of monitoring and evaluation systems in enhancing project performance. The study emphasised on the critical role of human, financial and material resources in influencing project performance.

Mugo (2014) conducted a study on Monitoring and evaluation of development projects and economic policy development in Kenya. The researcher collected data using survey questionnaires distributed to the personnel in the Ministry of Devolution and Planning of Kenya. The study specifically sought to determine the influence of training of the personnel, financial resources allocation and stakeholders' participation on implementation of monitoring and evaluation. With regard to financial resources allocation, the study established that the factor does positively influence M&E success and ultimately project success and economic growth.

Oluoch (2014) undertook a study on determinants of effective monitoring and evaluation systems through a case study of national youth service empowerment projects (Nairobi region). The study adopted a descriptive research design and data collected using questionnaires and responses sought from managers and supervisors. The researcher utilised both descriptive and inferential analysis procedures and output. The study established that financial, human and material resources played a major role in project success. Inadequate funds for Monitoring and Evaluation was however identified as the biggest challenge affecting the monitoring and evaluation undertakings.

RESEARCH METHODOLOGY

Research Design

The research exploited a descriptive survey research design. Mugenda and Mugenda (2003) presents a descriptive survey research approach as being concerned with the current status of the

subjects under study and seeks to uncover the interactions that exist in and between variables without an alteration of conditions in the environment. According to Bulmberg, Cooper, and Schindler (2011), the descriptive study design is concerned with finding out the what, where and how of a study phenomenon. The study approach is applicable in situation where the associations between study subjects are already manifested and not easy to manipulate ((Kothari, 2011). The exploitation of the design approach was justified by the fact that, the phenomena under study could not be altered as it involved already existing conditions.

Target Population

The target population for this study was made up of 86 water projects funded by the Constituency Development Fund in Nyeri County as gathered from the National Government Constituency Development Fund. The water projects were distributed in the 6 sub counties making up Nyeri County which are Tetu, Mathira, Mukurweini, Othaya, Kieni and Nyeri Town. The study specifically targeted the 86 Project Managers for the water projects in the county.

Sampling Strategy and Sample size

The study used stratified sampling to select the projects for the study. A stratified random sampling procedure is a population sampling procedure that requires the population to be divided into smaller groups, called strata (Mugenda & Mugenda, 2003). Stratified sampling certifies that the different clusters are represented, even proportionately, in the sample(s) by picking individuals from each of the strata list. To ensure inclusivity, the participations were randomly selected from each strata (constituencies) using proportionate stratified random sampling formula as presented by Mugenda & Mugenda (2003). The formula is presented as:

$$nh = (N_h / N) * n$$

Where: nh is the sample size for stratum h, N_h is the population size for stratum h, N is total population size, and n is total sample size.

This led us to a total of 60 participants which meets and even surpasses the threshold of 30 as presented by Kothari (2011) and Mugenda and Mugenda (2003) as a rule of thumb for making normal approximations.

Data Collection Instrument

Both primary and secondary data sources were exploited for purposes of obtaining necessary information to serve the fulfilment of the study objectives. The researcher collected primary data using questionnaires as the choice collection instrument. A questionnaire is a device for information collection in which each individual is required to provide answers to the same set of items in a predetermined manner and order (Sekaran, 2006). The instrument was delivered to the

respondents by the researcher in person and picked at after two weeks. The respondents comprised of the Project Mangers of the Water Projects selected for purposes of the study.

Data Collection Procedure

The questionnaire was the appropriate instrument for data collection as suggested by Orodho (2009) who posited that a questionnaire is an instrument used to collect information, allowing a measurement in support of or contradicting a specific viewpoint. Questionnaires are actually not hard to administer, provides the respondent enough time to provide a nicely thought-out response and therefore are totally free from the researcher's bias. The instrument was delivered to the respondents by the researcher in person and picked at after two weeks. The respondents comprised of the Project Mangers of the Water Projects selected for purposes of the study. Pretesting of the instrument and expert opinions from lecturers was done to ensure that the research instrument utilised in data collection would actually measure what it was intended to measure. The researcher put into account views of experts and made adjustments until the researcher and experts were all satisfied to the validity status of the instrument. Mugenda and Mugenda (2003) has presented Expert Opinion and Pilot studies as some useful methods for testing validity of research instruments. The researcher also tested the reliability of the research instrument which is essentially the extent to which the research instrument, administered more than once would yield consistent results. Any significant results, according to Kothari (2011) should be more than a one-time instance finding should also be inherently repeatable. The researcher utilised the Cronbach's Alpha Reliability Test to test the internal consistency reliability of the instrument. The Cronbach's alpha coefficient for 17 items was 0.737 which indicated a relatively high internal consistency (Gliem & Gliem, 2003).

Data Analysis and Presentation

Data was first be cleaned, categorised in line with the study objectives and coded into the SPSS software. The researcher generated both descriptive and inferential statistics. Descriptive statistics included means, modes as well as frequency distributions. Inferential statistics utilised included regression model outputs as well as the Pearson correlation analysis results. The researcher utilised both bivariate and multivariate analysis. Qualitative data was analysed by use of content analysis. The regression model developed was of the type given below as generated using SPSS software. The model has been adopted from (Kutner, Nachtsheim, and Neter, 2004). The model specification, borrowing on the theories and literature reviewed was specified as follows; $Y = f(R)$. The model means that Project Performance is a function of Resource Availability.

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Where: Y= Project Performance; X_1 = Resource Availability; B_0 is a constant representing the regression intercept; β_1 is the regression coefficient; while ϵ is the error term.

The researcher presented the findings by use of tables and charts, frequencies and percentages.

RESEARCH RESULTS

Project Performance

The study utilised the Project Management Diamond in measuring the level of Project Performance. The method considers the cost (budget) performance, Time (Schedule) performance, scope (deliverables) performance and Quality (standards) performance. Research findings indicated that the water projects in Nyeri County were well managed, going by cost indicators. On average, the study established realisation of cost savings for the water projects amounting to Kshs 261,900.00. Total cost savings for all the water projects amounted to 13,000,000 which was indicative of good cost performance of the projects as earlier indicated by Mwangi, Nyang'wara, and Kulet, (2015), Mutua (2013) and Oloo (2011). From the results, more than two thirds of the water projects experienced cost savings. Only approximately a third of the projects experienced overruns. This further good cost performance of the water projects. Prudent Management of resources, project downscaling and strict spending policies were cited as some of the reasons for cost savings as prescribed by (Tero, 2014).

Research results on schedule (time) performance of the water projects funded by NG-CDF in Nyeri County, Kenya indicated that the schedule performance of the water projects was not very good. On average, the projects resulted in overruns of up to approximately 4 months. This was indicative that the water projects in Nyeri County were hardly completed within the planned schedules. The study results agree with past studies by Mutua (2013) and Oloo (2011) who also indicated poor schedule performance of NG-CDF projects.

Statistics on the general nature of schedule deviation for the water projects demonstrated that more than half (53.85%) of the water projects had unfavourable schedule deviations (overruns). The lesser proportion (46.15%) of the water projects reported time favourable deviation (savings). The study concur with Mutua (2013) and Oloo (2011) who also indicated unfavourable schedule overruns for NG-CDF projects.

Results on the extent to which the water projects were conducted within the standards conceptualised in the definition stages and results demonstrated that the water projects were largely within the standards set at definition or planning stage. This is demonstrated by the statistics (mean 3.91, SD 1.06) which indicate high agreement with the proposition and that observations were closely held about the mean. Thus, a conclusion is reached that the standards performance of the water projects was good. The results agree with past studies by Mutua (2013) and Oloo (2011) who indicated that CDF projects were within projected standards but disagree with Mwangi, Nyang'wara, and Kulet (2015), who indicated the contrary position

The scope performance of the water projects were generally good. This was demonstrated by the mean (3.73) which indicates agreement with the proposition. The low standard deviation (1.30) further confirms that the observations are held close to the mean. The water projects therefore had good standards (deliverables) performance. The results agree with Mutua (2013) and Oloo (2011) who also held a similar position.

Resource Availability

All the water projects had an allocation of 5% of PMC expenses as spelt out in law and as earlier observed in past studies (Matetai & Yugi, 2016). More than three quarters of the respondents (77.55%) cited financial and material resources as the most critical project possessions for M&E purposes. The lower cut class (22.44%) of respondents cited human and technical resources as most critical for M&E exercises. The findings agree with Matetai and Yugi (2016) who indicated a similar position. Research results indicated by the mean (2.27) showed that it was largely held that the allocations for monitoring and evaluation exercises were inadequate. The low standard deviation (0.84) further affirm this condition indicating that the observations were held close about the mean. The findings agree with Matetai and Yugi (2016) who also indicated that M&E funds were not sufficient.

As demonstrated by the mean (4.00), results indicated that personnel were adequate. This is affirmed by the low standard deviation (1.19) which indicates that the observation were tightly held about the mean. The findings agree with Onchoke (2013) and Meri (2013) who reported similar positions. As demonstrated by the mean (3.88), the monitoring and evaluation materials and tools available were adequate. This is further affirmed by the low standard deviation (1.39) which demonstrates proximity of observations about the mean. The results share with past indications by Onchoke (2013) and Mugo (2014) who provided similar statistics.

Effect of Resource Availability on Performance of Water Projects

The study utilized the Pearson Correlation Analysis as key tool towards reliably testing the research hypothesis and making justifiable inferences. This is because inferential statistics allow generalizations on the population. For this purpose, the level of significance was set at $\alpha = 0.05$. The null hypothesis to be tested was captured as:

H_{01} : Resource Availability has no significant effect on performance of water projects funded by National Government Constituency Development Fund in Nyeri County, Kenya.

The Pearson Correlation Coefficients for resource availability (0.754) shows a very strong and positive relationship with project performance. The relationship is statistically significant since the p-value (0.002) is below the 5% level of significance. The results agreed with Onchoke (2013), Meri (2013) and Mugo (2014) who indicated that resource availability was positively related with project performance.

Table 1: Pearson Correlation Analysis

		Project Performance
Resource Availability	Pearson Correlation	.754**
	Sig. (2-tailed)	.002
	N	49

** . Correlation is significant at the 0.01 level (2-tailed).

CONCLUSIONS AND RECOMMENDATIONS

Based on results, performance of water projects in Nyeri County was good as indicated by cost, standards and scope indicators. The Pearson correlation analysis results informed a conclusion that resource availability plays a critical role in determining the level of project performance and was positively associated with project performance. While cost, scope and standards performance was found to be good, the schedule performance of projects was wanting. The study recommends that the project management team device ways to improve the schedule performance of water projects which was found to be unsatisfactory. On resource availability, it was indicated that the allocation for monitoring and evaluation as anchored in law was inadequate. This situation could be hurting the efficiency and effectiveness of monitoring and evaluation of water projects. The study recommends to legislative authorities to consider legislative changes to enhance the allocations for M&E as financial and material resources were seen to be the most critical project monitoring and evaluation possessions.

REFERENCES

- Anbari, F. T., Carayannis, E. G., & Voetsch, R. J. (2008). Post-project reviews as a key project management competence. *Technovation*, 28(10), 633–643.
- Bulmberg, B., Cooper, D. R., & Schindler, P. S. (2011). *Business research methods*. McGraw-Hill/Irwin, Boston.
- Burke, R. (2013). *Project management: planning and control techniques*. New Jersey, USA. Retrieved from <http://www.cupa.ir>
- Cleland, D. I., & Ireland, L. R. (1994). *Project management: strategic design and implementation* (Vol. 4). McGraw-Hill New York, NY.
- Crawford, P., & Bryce, P. (2003). Project monitoring and evaluation: a method for enhancing the efficiency and effectiveness of aid project implementation. *International Journal of Project Management*, 21(5), 363–373.
- Earl, S., Carden, F., & Smutylo, T. (2001). Outcome mapping. *Building Learning and Reflection into Development Programs*. Ottawa: International Development Research Center. Retrieved from <http://dspace.africaportal.org>
- Gikonyo, W. (2009). Constituency Development Fund (CDF) social audit guide: a handbook for communities - Eldis. Retrieved April 20, 2016, from <http://www.eldis.org>

- Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education. Retrieved from <https://scholarworks.iupui.edu>
- Jackson, B. (1997). Designing projects and project evaluations using the logical framework approach. *UCN Monitoring and Evaluation Initiative*.
- Jones, H., & Hearn, S. (2009). *Outcome mapping: A realistic alternative for planning, monitoring and evaluation*. Overseas Development Institute.
- Kothari, C. R. (2011). *Research methodology: methods and techniques*. New Age International. Retrieved from <http://books.google.com>
- Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). *Applied linear regression models*. McGraw-Hill/Irwin.
- Matetai, M., & Yugi, P. (2016). Assessment on the Use of Monitoring and Evaluation System in Constituency Development Fund, Nairobi County. *Journal of Public Policy and Administration*, 1(1), 32–48.
- Meri, J. B. (2013). *Determinants of effective monitoring and evaluation systems for non profit projects: a case of international Non Governmental Organizations projects in Nairobi* (Thesis). Kenyatta University.
- Mugenda, O. M., & Mugenda, A. G. (2003). *Quantitative and qualitative approaches: Research methods*. Nairobi: Acts Press.
- Mugenda, Olive M., & Mugenda, A. G. (2003). *Research methods*. Nairobi: ACTS.
- Mugo, P. M. (2014). *Monitoring and evaluation of development projects and economic policy development in Kenya*. University of Nairobi.
- Ngacho, C., & Das, D. (2014). A performance evaluation framework of development projects: An empirical study of Constituency Development Fund (CDF) construction projects in Kenya. *International Journal of Project Management*, 32(3), 492–507.
- Oginga Onjala, J. (2002). Managing water scarcity in Kenya: Industrial response to tariffs and regulatory enforcement. Retrieved from <http://diggy.ruc.dk/handle/1800/470>
- Oluoch, S. O. (2014). *Determinant of effective monitoring and evaluation systems a case study of national youth service empowerment projects (Nairobi region)* (Thesis). Kenyatta University.
- Onchoke, N. K. (2013). *Factors influencing performance of community development projects in Kenya: a case of Kisii Central District*. (Thesis). Kenyatta University.
- Otieno, G. O. (2007). Measuring effectiveness of constituency development fund on poverty reduction in Siaya district. *Economics and Social Sciences Department, Maseno University*.
- Prennushi, G., Rubio, G., & Subbarao, K. (2002). Monitoring and evaluation. *A Sourcebook for Poverty Reduction Strategies*, 107–30.
- Ramani, K. V. (2006). Logical Framework Analysis.

- Rijsberman, F. R. (2006). Water scarcity: fact or fiction? *Agricultural Water Management*, 80(1), 5–22.
- Rosenau, M. D., & Githens, G. D. (2011). *Successful project management: a step-by-step approach with practical examples*. John Wiley & Sons.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2003). *Evaluation: A systematic approach*. Sage publications.
- Schwalbe, K. (2008). *Introduction to project management*. Cengage Learning.
- Shenhar, A. J., & Dvir, D. (2007). *Reinventing project management: the diamond approach to successful growth and innovation*. Harvard Business Review Press.
- Smutylo, T., & others. (2005). Outcome mapping: A method for tracking behavioural changes in development programs. *ILAC Brief*, 7. Retrieved from <http://issat.dcaf.ch>
- Tero, J. (2014). *Factors Influencing Performance of Constituency Development Funded Dispensary Projects in Kenya: A Case of Nandi County* (PhD Thesis). Master's Thesis University of Nairobi.
- Turner, J. R. (2014). *The handbook of project-based management* (Vol. 92). McGraw-hill.
- Wacheke, A. (2006). *Climate Variability and Water Resources Degradation in Kenya: Improving Water Resources Development and Management*. World Bank Publications.