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## **The Moderating Effect of Regulatory Framework on the Relationship between Technical Capacity and Effective Management of National Government Constituency Development Funded Projects in Kasipul Constituency, Homa Bay County, Kenya**

**Walter Otieno Andhoga**

Ph.D. Student, Department of Political Science and Peace Studies, Kisii University, Kenya

**Dr. George N. Mose**

Lecturer, Kisii University, Kenya

**Dr. Johnson N. Mavole**

Lecturer, Catholic University of Eastern Africa, Kenya

### **Abstract:**

*Kenya experienced a transition to a multi-party form of governance for almost three decades now. The same period has been engulfed with lots of attempts for decentralization. However, with entrance of new regime back in 2002, decentralization gained wide acceptance consequently implemented fairly. This study is moored on an understanding that good governance anchored on clear regulatory framework in the public realm which is an avenue for promotion of suitable local representation and enhancing transparency in decision making. Considering National Government (NG)-Constituency Development Fund (CDF) Act 2003 and Amended in 2007 focusing on project focus and more constituents driven. This study was carried out at Kasipul Constituency, in Homa Bay County where the general completion rates at the moment stands below average. The study adopted mixed method research design where approximately 494 respondents comprising of project beneficiaries, NG-CDF contractors, project managers and government representatives were targeted. Questionnaires, focused discussions and interview guides were used as tools to collect quantitative and qualitative data. Structural Equation Modeling (SEM) was employed to test the hypothesis at 5% level of significance. From the findings, the study rejected the null hypothesis and concluded that regulatory framework has a significant moderating effect on the relationship between technical capacity and effective CDF project management in Kasipul Constituency. There is also need for trainings/workshops meant to increase managers' expertise, skills and knowledge of implementing CDF project efficiently. On the other hand, personnel can be increased at the county/constituency level to monitor human resource involved in the management of CDF funded projects, coming up with legislation on the appointment of various stakeholders involved in the management of CDF funded projects who will check on the quality of the projects implemented.*

**Keywords:** *Regulatory framework, technical capacity, effective management, national government constituency development fund, structural equation modeling*

### **1. Introduction**

Decentralisation has become a global phenomenon that is pursued in many countries with the given intention (s) of improving service delivery, enhancing governance and accountability, increasing equity, and/or promoting a more stable state, and the like (Martinez-Vazquez, Lago-Peñas & Sacchi, 2017). According to World Bank, (2015) decentralization leads to the desired equitable distribution of resources. Also, it was expected to ensure improvement in the delivery of services such as health and education while empowering local communities so for attainment of development. Decentralization has been practiced throughout various European nations where the European Union (EU) establishing Structural Funds to support economic development across all EU countries (Babajanian, 2005; Royles, 2006). In Latin America, for example, which is the most urbanised region in the developing world, marked with the most extreme inequality in the world, has embraced decentralization for varied reasons (Bossuyt, 2013). Following those developments globally, the administrations in most of countries in Africa have been reformed and their local actors given more power in the management of public affairs (Ajwang,

2017). In Africa, decentralization is associated with a number of beneficial outcomes that have direct or indirect bearing on local and national governance (Amponsah, 2012). Technical capacity was considered as one of the pillars that gained recognition as an agent of good governance and democratization is decentralization in Africa. Owusu et al. (2005) indicated that decentralization in Ghana has a positive impact on local government service delivery and strengthening of their mandate, there was still some shortcoming such as technical expertise capacity as well as good infrastructure.

Decentralization in Kenya began with introduction of District Focus for Rural Development (DFRD) 1993 by the Government as a strategy to further decentralized development interest using districts as key development units (Chitere & Ireri, 2008). Local Authorities Service Delivery Action Plan (LASDAP) was then introduced in 2001 with aim of allowing local authority jurisdiction residents to participate in decision making process, implementation, monitoring and evaluation of various services delivered to them. Both DFRD and LASDAP had various challenges such as institutional capacity, technical capacity and managerial skills, resources sufficiency, and accounting as well as accountability (Devas, 2005).

The findings from the study may inform NG - CDF policies at the National Assembly level, County government level and the NG - CDF Secretariat level on the administration of NG - CDF at the constituency level and how such administration accelerate or deter projects completion. Particularly, the policies may be empirically informed about the following key aspects of NG - CDF administration; analysis of factors that informed changes in the administration structure of the Fund, the level of fund awareness brought about by these administrative changes among the constituents, the level of community participation in the selection and implementation of projects brought about by the administrative changes, the administrative, transparency and accountability mechanisms brought about by the changes and whether NG - CDF projects had benefited the local citizens by comparing outputs against stated objectives of the Fund.

Kasipul Constituency, one of the constituencies in Homa Bay County comprises of five wards; West Kamagak, West Kasipul, East Kamagak, South Kasipul and Central Kasipul. According to Kenya National Bureau of Statistics 2013 for Homabay County, the population for Kasipul was projected to be 183,073 in the year 2015 with a population density of 525 KM<sup>2</sup>. Poverty rate in the constituency is 49.4% with small majority of the population engaged in small scale agriculture and SMEs. The Constituency poverty index is higher than national average of 47%. In 2013/2014 it received Ksh. 75,059,249.00, 2014/2015 it received Ksh. 107,763,163 and 2015/2016 it received Ksh. 114,199,520 from the national budgets of those financial years. Commonly, the NG-CDF has been utilized in education, health, roads, water, and security. According to project implementation status report as at May 2016, some of the projects that started 2013/2014 had not been completed. Construction of Oyugis Community Library has not been started due to delay in fund disbursement for FR 2014/2015. Majority of completed projects have been found to cost more than what was budgeted, for example construction of Construction of a greenhouse at AgoroSare High School required extra Ksh. 50,000. The delay in completion of these projects and need for extra cost for their completion is the basis of the study.

Technical capacity is required during identification of CDF project, planning and implementation as well as monitoring and evaluation. The CDF amendment Act (2015) provides that PMCs any person sourced should have the required knowledge to assist the Constituency committee in discharging its mandate. However, Kaliba (2013) found that majority of the PMC staff did not have required professional qualifications in financial and project management. Muchiri (2014) revealed that CDF projects in Mbooni were not completed in time due to inadequate skills as well as human resource which is poorly trained. Similar results were obtained by Ngeno (2014) in Buret Constituency. Mwangi and Nyang'wara (2015) and Kipsaina (2010) found that monitoring and evaluation of CDF projects have been negatively affected due to inadequate technical capacity. This study is therefore aiming at exploring the effect of technical capacity on effective management of CDF funded projects in Kenya

## 2. Review of Literature

In Africa and to some extent the rest of the world, project management approach is considered the most effective technique for turning around the performance of all sectors of development. This paper considers empirical studies on the determinants of project management with special focus on the monitoring and evaluation (legal framework), and technical capacity in the decentralized system of governance. One of the main objectives of decentralized system of governance is equitable and transparent allocation of resources to the benefitting community. The CDF Act (2013) provides that PMCs will implement projects with support from the CDF and technical advice from relevant government department.

In 1980s, McClelland and McBer established the competence theory. They elaborated that competency as the primary characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation (Cicmil and Hodgson, 2006). Technical capacity includes technical skills, interpersonal skills and conceptual skills. The ability to communicate, responsive behavior, and tactics of negotiation are what competence is made off. Adan, (2012) indicated that technical officers have a positive impact on the Constituency development funded projects performance through their roles in project identification, planning, implementation and monitoring and evaluation of such projects. Tero (2014) concluded that the competence of the implementation team influenced the performance of the CDF funded dispensaries.

According to Zainabu (2008), self-help projects in Kwale district were discovered to be doing poorly, due to lack of training. a trained business person will be able to evaluate the course of a venture in view of both internal and external forces and fix any deviation if identified. Wamuhu (2010) studied the influence of training on the implementation of community-

based projects in Nyeri district where indicated that training in skills and knowledge of basic project management should be emphasized in order to steer projects effectively.

To achieve the objectives and goals set by the government in allocation of CDF resources proper financial management practices for the resources should be put in place to aid in planning, coordinating and control of the resources. Little research has been carried out on the area of financial management practices specifically on the CDF, though there has been continual attention on the misappropriation on the use of CDF fund. Therefore, this paper aims at determining and testing relationship between availability of technical resources and effective management of CDF project in Kasipul Constituency in Homa Bay County.

The project managers make decisions based on the policies and procedures according to the NG-CDF Act. Donaldson and Davis established stewardship theory in 1991 and 1993 respectively. The Stewardship Theory states that there is no conflict of interest between managers and owners. The most fundamental thing is find harmonization between the owners and the managers (Tornyev and Wereko, 2012).

The Constitution of Kenya is the supreme law of the Country; all laws work within the precincts of the constitution. Thus, both the CDF Act, 2003, and the Constituencies Development fund (Amendment) Act, 2016, do not contradict the laws of the land in the aspects of utilization of public resources or any other, and they do comply with Section 99(1-4) of the constitution on the Consolidated Fund and other public funds.

### 3. Research Methodology

The study made use of mixed-methods research design where both qualitative data and quantitative data for triangulation purposes while examining the effectiveness of NG - CDF management in Kasipul constituency. The study targeted 254 projects in the Kasipul Constituency between 2013/2014 and 2015/2016 in the five wards. The projects were categorized as education, health, water, security, roads, sports and environment. These projects formed the unit of inquiry from which three beneficiaries were selected. The study therefore targeted 183,073 possible beneficiaries, 254 project managers, 10 NG-Constituency development fund committee and 7 government representatives (departmental heads from the respective represented sectors). From these universe populations, samples were drawn to collect relevant data for this study. Tools including questionnaires, focused group discussions schedules and interview guides were used to collect relevant data. Primary data was collected by use of questionnaires and interview guides while secondary was obtained from CDF project records. Further, primary data was obtained from the focused group discussions constituted of the beneficiaries.

A pre-field survey was conducted by the researcher to ascertain on some parameters during the proposal writing process in Kasipul Constituency. These parameters included: - Projects executed by the constituency administration within the study period, the type of projects done, the budget allocated. Informed by this pre-field study, this study sampled 77 NG-CDF projects from 254 projects. The sample size for the projects in this study was selected based on the criteria set by Roscoe's rule of thumb Sekaran (2003) i.e. a sample that is larger than 30 and less than 500 is appropriate for most research. Also, according to Mugenda & Mugenda (2008) a sample size of between 10% and 30 % is a good representation of the target population while according to Dooley (2007), a sample size of between 10% and 40% is considered adequate for detailed or in-depth studies hence the 30.31% of the NG-CDF projects was adequate for analysis. The sample size of 77 NG-CDF projects was obtained using coefficient of variation. Nassiuma (2000) asserts that in most surveys or experiments, a coefficient of variation in the range of 21% to 30% and a standard error in the range of 2% to 5% is usually acceptable.

$$S = \frac{N(Cv)^2}{(Cv)^2 + (N - 1)e^2}$$

Where S = the sample size

N = the population size

Cv = the Coefficient of Variation

e = standard error

Therefore, the sample size was:

$$S = \frac{254(0.212)}{\{0.212 + (254-1) 0.022\}} = 76.87989019 \approx 77 \text{ NG-CDF Projects}$$

Further, the researcher adopted Yamane, (1967) formula that can be used to calculate a suitable sample for the study which comprised of all NG-CDF beneficiaries currently in the Wards.

$$n = \frac{N}{1 + Ne^2}$$

Where n = Minimum Sample Size; N = population size: - e = precision set at 95 % (5%=0.05)

183,073 (Study population) x 0.5 =

n = 183,073

1+183,073(0.0025)

n = 399.11  $\approx$  400 Beneficiaries.

The projected sample size for the beneficiaries were 400 respondents from the 77 CDF projects, all the 10 NG - CDF committee members of Kasipul Constituency, 77 Contractors/project managers awarded contracts between 2013/2014 and 2015/2016 and 7 government representatives (departmental Heads). The researcher applied multi-stage sampling technique to select the 400 beneficiaries of 77 CDF projects. Initially, the researcher used proportionate sampling technique to get proportionate number of projects from each ward in the constituency. Then the researcher formed focused group discussions to get important information that needs clarification from the constituents. According to the Kenya national government constituencies Development fund Act 2015, NG - CDF committee at the constituency level should have 10 members. These 10 members represent general interests of the Constituency. The researcher used census sampling technique of all the 10 NG - CDF committee members to form part of the sample of interest to the study. The researcher targeted to interview the committee members from each of the NG-CDF projects sampled, contractors/project managers and government heads departments who also formed part of the sample of this study.

To enhance reliability, the researcher prepared questionnaires and interview guides and administer them to the similar respondents' in Kasipul Constituency for pre-testing purposes. These respondents were however not used in the main study. Approximately 15 participants were used for pilot study. This is according to Isaac and Michael (1995) who suggested 10 – 30 participants is ideal in pilot study. To measure the reliability, the Alpha (Cronbach) technique was also employed. On the other hand, validity focused on how well a concept, idea, or behavior that is a construct has been translated or transformed into a functioning and operating reality (Aila & Ombok, 2015). The study uses 15 respondents in pilot study to ascertain validity. In addition, since all the respondents are relatively homogenous in terms of socio-culture and socio-economic, the results can be generalized to the entire population of the study.

Descriptive and inferential statistics techniques were used to analyze quantitative data. Descriptive statistics used included frequencies, percentages and mean. For qualitative data, information gathered was coded and analysis was done through narration of the voices from interviews conducted. Specifically, content analysis was used to test data that was qualitative in nature or aspect of the data collected from the open ended questions and interviews. Data were presented in themes using verbatim and narrations. Inferential statistics was used to test the associations and relationships between the moderating, independent variable and the dependent variable (effective implementation of NG - CDF projects) in Kasipul Constituency. The moderating effect of regulatory framework on the relationship between technical capacity and dependent variables was measured using Structural Equation Modelling (SEM) which is best suited to analyze paths for latent variables. SEM provides a more parsimonious representation of the constructs and a better way to account for the individual contribution of each item by more precisely modelling measurement error (Bollen, 1989). Respondents' responses to five items that measured technical capacity latent factor. The study considered other five items that were used to generate regulatory framework that was employed in moderating the model. For the dependent variable, six items derived from schedule, budget, scope, objectives and user satisfaction were used to create a latent factor of NG-CDF project management. Before carrying out path analysis, correlation analysis was performed through use of correlation matrix. This ensures that latent variables are not highly correlated. The following is the general model used for latent and quantitative procedures examining the relationship of unobserved variables;

$$y = \beta_1 X_1 + \beta_2 Z + \beta_3 X_1 Z + \varepsilon$$

Where;

$Y$  = Effectiveness of NG - CDF project management whereas  $\beta_1$ ..... $\beta_2$  = Regression Coefficients;  $X_1$  = Technical capacity ;  $Z$  = Regulatory framework;  $X_1 Z$  = interaction term between  $X_1$  and  $Z$  and  $\varepsilon$  = the error of term.

These analyses were done using STATA version 14 and the quantitative data was presented in terms of tables and figures. Note that both the constructs were measured in a five Likert scale. Discretion was strictly observed in the course of this research. All ethical considerations were considered. For confidentiality, the identity and privacy of the respondents was protected by the researcher. No pressure or inducements of any kind was applied to encourage the respondents to become participants in the research study.

#### 4. Results and Discussion

Considering the instrument return rate, out of the 400 of the questionnaires distributed to NG-CDF beneficiaries the researcher was able to collect 321 questionnaires representing 80.25% and out of 77 distributed to NG-CDF contractors and project managers, the researcher was able to collect 71 back representing 92.2%. Out of the 10 questionnaires distributed to NG-CDF committee members all the questionnaires were returned giving a return rate of 100%. Generally, the return rate was high and able to answer the set objectives of the study. Mugenda and Mugenda (2003) assert that a response rate of more than 50% is adequate for analysis. Babbie (2004) also asserts that a 60% return rate is good and a 70% return rate is very good.

##### 4.1. Technical Capacity

Technical capacity was operationalized along five dimensions namely expertise, training, skills and requisite knowledge. Five statements were formulated to measure the technical capacity construct using a five-point Likert-type scale ranging from 1=strongly disagree to 5= strongly agree and respondents were asked to indicate the extent to which they agreed to the statements. They included; stakeholders involved in the management of NG-CDF possession of the required expertise in

their respective domains, stakeholders having gone through the required training that equip them with project management skills, the stakeholders trained and are able to monitor and report project status and progress of the implemented projects, responsibilities of the management of NG-CDF projects distribution according to academic qualifications, availability of technical capacities among human resources to effectively manage CDF projects.

| Technical Capacity                | Beneficiaries |      | Managers/<br>Contractors |      | Ng-Cdfc<br>Members |      |
|-----------------------------------|---------------|------|--------------------------|------|--------------------|------|
|                                   | Mode          | Mean | Mode                     | Mean | Mode               | Mean |
| Expertise                         | 4             | 3.63 | 4                        | 3.69 | 5                  | 4.5  |
| Training                          | 4             | 3.65 | 5                        | 4.04 | 4                  | 4.4  |
| Monitoring and Reporting skills   | 4             | 3.71 | 4                        | 4.06 | 5                  | 4.4  |
| Academic qualifications           | 5             | 3.8  | 4                        | 3.75 | 4                  | 4.1  |
| Human Resource technical capacity | 4             | 3.7  | 4                        | 4.14 | 4                  | 4.3  |
| Overall Mean                      |               | 3.7  |                          | 3.94 |                    | 4.34 |

Table 1: Technical Capacity

Source: Field Data (2017)

Findings on stakeholders' expertise as from beneficiary's point of view as indicated by the mode of 4 shows that majority of respondents agreed that beneficiaries were involved in the management of NG-CDF possessed the required expertise in their respective domains that enhanced the management of NG-CDF projects. The managers also on average agreed while CDF members were in strong agreement to this as shown by the modes 4 and 5 respectively. On training, the beneficiaries were averagely in agreement that stakeholders are equipped with prerequisite training, skills and approaches to adequately monitor and report the project's status and progress while the managers were in strong agreement to this. The CDF members were also in agreement. Majority of the beneficiaries also agree that stakeholders are equipped with prerequisite training, skills and approaches to adequately monitor and report the project's status as shown by the mode of 4. Contractors and managers are also in agreement while the CDF members are in strong agreement.

On average, the beneficiaries strongly agree that responsibilities in the management of CDF projects are distributed according academic qualification and knowledge in specific area of specialization s indicated by the mode of 5. The contractors and CDF committee agree to this with a modal class of 4. The modal class for human resource technical capacity for beneficiaries, contractors and CDF committee members are all 4. This shows that on average all the respondents agree that there is sufficient technical capacity amongst human resources to effectively manage CDF Projects.

#### 4.2. Regulatory Framework

|                               | Beneficiaries |      | Managers/Contractors |       | NG-CDFC Members |      |
|-------------------------------|---------------|------|----------------------|-------|-----------------|------|
|                               | Mode          | Mean | Mode                 | Mean  | Mode            | Mean |
| Clear policies and procedures | 5             | 4.08 | 4                    | 4.35  | 4,5             | 4.5  |
| Technical capacity            | 3             | 3.23 | 4                    | 3.97  | 4               | 4.2  |
| Participation                 | 4             | 3.46 | 4                    | 4.17  | 4,5             | 4.5  |
| Policies and practice         | 5             | 3.89 | 4                    | 3.85  | 4,5             | 4.5  |
| Overall Mean                  |               | 3.67 |                      | 4.085 |                 | 4.43 |

Table 2: Regulatory Framework

Source: Field Data (2017)

From Table 2, most of the sampled beneficiaries revealed strongly that there are clear policies and procedures on financial practices that has results to effective management of CDF projects as shown by the mode of 5 while the managers and contractors just agreed with a mode of 4. The and CDF members had a mode of 4 and 5 implying that on average they either agree or strongly agree that there is clear policies and procedures on financial practices that has results to effective management of CDF projects. The beneficiaries on average are undecided on the CDF Acts on technical capacity implemented to the letter in the management of CDF projects as shown by the mode of 3. Manager and contractors are on average in agreement while majority of the CDF members are in agreement and strong agreement that CDF Acts on technical capacity implemented to the letter in the management of CDF projects. As shown by the mode of 4, both the beneficiaries, contractors and managers agree that that the CDF Acts on community participation has been fully embraced resulting to efficiency and effective management of NG-CDF projects. Majority of the CDF members agree and strongly agree to this. The mode for beneficiaries on policy practice was 5 implying that majority strongly agreed that the CDF Acts on the relationship between politics and CDF has effectively implemented results to non-interference in the management of CDF projects. The contractors and managers strongly agree while the CDF members have both 4 and 5 as the mode implying that they agree and strongly

agree that that the CDF Acts on the relationship between politics and CDF has effectively implemented results to non-interference in the management of CDF projects.

#### 4.3. Test of Hypotheses

The study fitted Structural Equation Modelling (SEM) for hypothesis testing. The SEM is a general linear model extension that allows researchers to test more than one regression equation simultaneously. The structural model characterizes the relationships between the constructs or the latent variables and defines those latent variables that indirectly or directly cause alterations in the values of other latent variables in the model (Byrne, 2013). SEM allows examination of the indirect relationships between variables, an approach missing in previous studies. In SEM, the study assessed both the measurement model and the confirmatory structural model.

The measurement model was used where the main concern was the measurement of the latent variables and their indicators. Factor analysis was used for dimension reductions to explore the underlying factors and unidimensionality of each construct (Leech, Barrett and Morgan, 2011). Table 3 shows the results of the measurement including factor analysis results showed that all indicators of the 3 latent variables effective project management and technical capacity and regulatory frameworks belonged to their relative latent constructs. All the indicators had loadings above 0.4 on the constructs. The table also shows the assessment of validity and reliability of the measurements.

| Latent Variable              | Indicator |                               | Factor Loading | Squared Multiple Correlations | AVE   | Cronbach |
|------------------------------|-----------|-------------------------------|----------------|-------------------------------|-------|----------|
| Technical capacity           | PF1       | Accountability & transparency | 0.763          | 0.552                         | 0.790 | 0.847    |
|                              | PF2       | Satisfactory auditing process | 0.720          | 0.647                         |       |          |
|                              | PF3       | Timely disbursement           | 0.815          | 0.428                         |       |          |
|                              | PF4       | Sufficient funds allocations  | 0.846          | 0.501                         |       |          |
|                              | PF5       | Adequate allocation           | 0.806          | 0.306                         |       |          |
| Effective project management | PM1       | Set timelines                 | 0.791          | 0.536                         | 0.773 | 0.866    |
|                              | PM2       | Set objectives                | 0.731          | 0.517                         |       |          |
|                              | PM3       | Budget provisions             | 0.750          | 0.463                         |       |          |
|                              | PM4       | Technical requirements        | 0.778          | 0.491                         |       |          |
|                              | PM5       | Quality standards             | 0.792          | 0.558                         |       |          |
|                              | PM6       | User satisfaction             | 0.799          | 0.571                         |       |          |
| Regulatory Frameworks        | RF1       | Clear policies and procedures | 0.831          | 0.535                         | 0.816 | 0.834    |
|                              | RF2       | Technical capacity            | 0.721          | 0.410                         |       |          |
|                              | RF3       | Participation                 | 0.874          | 0.723                         |       |          |
|                              | RF4       | Policies and practice         | 0.839          | 0.605                         |       |          |

Table 3: Measurement Model Summary

Source: Field Data (2017)

Each latent variable showed reliability as shown by the Cronbach alpha statistics used to examine internal consistency. All the 3 latent variables in study had Cronbach alpha statistics greater than the 0.7 Threshold. To assess construct validity, both convergent and discriminant validity of the data were examined (Fornell & Larcker, 1981). The average variances extracted for each of the 2 latent constructs were above 0.5 implying convergent validity. The average variances extracted were also all found to be larger than the squared multiple correlations implying discriminant validity. A correlation analysis of the latent variables was conducted and correlation coefficients obtained. This aids in assessment of the possible influence of the study variables on effective management of National Government Constituency Development Funded projects, as well as amongst themselves.

|                                    | Project Financing | Effective project management | Regulatory Frameworks |
|------------------------------------|-------------------|------------------------------|-----------------------|
| Project financing Corr.            | 1                 | .634**                       | .729**                |
| Sig.                               |                   | 0.000                        | 0.000                 |
| Effective project management Corr. | .634**            | 1                            | .732**                |
| Sig.                               | 0.000             |                              | 0.000                 |
| Regulatory Frameworks Corr.        | .729**            | .732**                       | 1                     |
| Sig.                               | 0.000             | 0.000                        |                       |

Table 4 : Correlations Matrix

Source: Field Data (2017)

Correlation analysis results for the 3 constructs is presented in table 3. The results indicate that technical capacity has a significant relationship with the dependent variable ( $r=0.634$ ,  $p\text{-value}<0.05$ ). The dependent variable (Effectiveness of CDF project management) also has a significant relationship with the moderating variable regulatory frameworks ( $r=0.729$ ,  $p\text{-value}<0.05$ ). The significant value adopted for all the correlations was set at a p value of 0.05, implying that the relationships were significant.

A SEM was fitted and from the goodness of fit of the model, it was found that model fitted the data well given that the chi-square statistic with p value of 0.000. This was also confirmed by other criteria for model fitness such as Root Mean Squared Error of approximation which was found to be 0.067 which is adequately below the desired threshold of 0.08. The model also met the other fit indices requirements normed fit index (NFI), comparative fit index (CFI), goodness of fit index (GFI) and parsimony fitness PGFI and PNFI as shown in table 5.

| Index      | Model     |        | Desired (Good Fit) Threshold | Status   |
|------------|-----------|--------|------------------------------|----------|
| Chi-square | Statistic | 66.597 | p-value <0.05                | Good fit |
|            | P-value   | 0.000  |                              |          |
| NFI        | 0.969     |        | $\geq 0.9$                   | Good fit |
| CFI        | 0.983     |        | $\geq 0.9$                   | Good fit |
| GFI        | 0.970     |        | $\geq 0.9$                   | Good fit |
| SRMR       | 0.037     |        | $\leq 0.08$                  | Good fit |
| RMSEA      | 0.052     |        | $\leq 0.08$                  | Good fit |
| PGFI       | 0.547     |        | $\geq 0.5$                   | Good fit |
| PNFI       | 0.564     |        | $\geq 0.5$                   | Good fit |

Table 5: Goodness of Fit Tests

Source: Field Data (2017)

The SEM fitted shows the extent of influence of technical capacity on effective NG-CDF project management. Table 6 shows the regression coefficient estimated weights of the SEM fitted. The path coefficients of the estimated model were tested for significance to establish the significance of the causal relationships between the determinants and effective management of projects. The critical ratio of the fitted estimates follows a standard normal distribution thus considers 1.96 as the critical point at 5% level of significance.

|     | Path |    | Estimate | S.E.  | C.R.   | P   |
|-----|------|----|----------|-------|--------|-----|
| PM  | <--- | TC | 0.633    | 0.07  | 9.021  | *** |
| TC5 | <--- | TC | 1        |       |        |     |
| TC4 | <--- | TC | 0.902    | 0.066 | 13.723 | *** |
| TC3 | <--- | TC | 0.878    | 0.07  | 12.619 | *** |
| TC2 | <--- | TC | 0.91     | 0.064 | 14.316 | *** |
| TC1 | <--- | TC | 0.735    | 0.063 | 11.724 | *** |
| PM1 | <--- | PM | 1        |       |        |     |
| PM2 | <--- | PM | 0.897    | 0.072 | 12.465 | *** |
| PM3 | <--- | PM | 0.827    | 0.072 | 11.407 | *** |
| PM4 | <--- | PM | 0.941    | 0.077 | 12.27  | *** |
| PM5 | <--- | PM | 1.006    | 0.07  | 14.45  | *** |
| PM6 | <--- | PM | 1.021    | 0.08  | 12.823 | *** |

Table 6: Regression Weights

Source: Field Data (2017)

The critical ratio for the estimate of technical capacity (TC) was found to be 9.021 that have an absolute value greater than 1.96 implying significance at 5%. This implies that project financing improved the effective management of NG-CDF funded projects. Figure 1, shows details on the paths with respective coefficients.

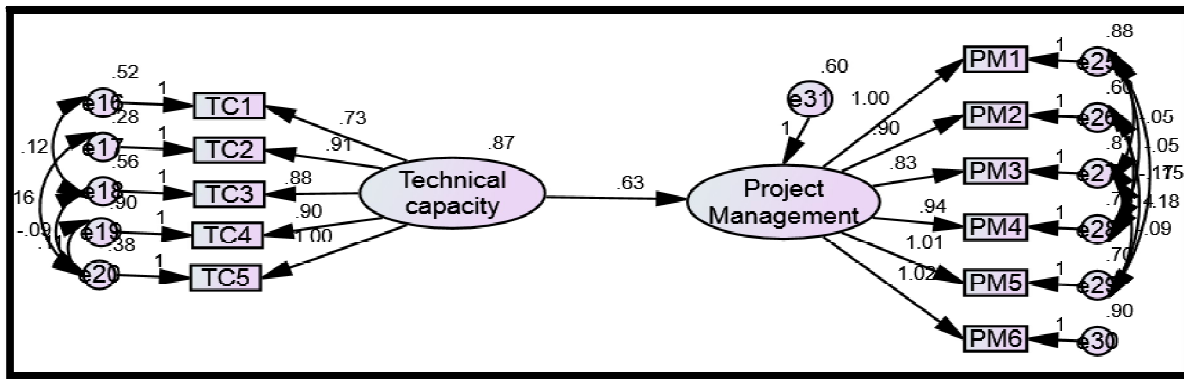


Figure 1: Path Diagram for Model 1 on the Effect of Technical Capacity

Table 5 and figure 1 estimates was revealed that increasing financing of the projects by a unit significantly raises the effectiveness of NG-CDF project management by 0.63 units. This implies that. From the significant model the following equation was generated;

- SEM:  $\widehat{PM} = 0.63TC$

This study concurs with the findings obtained by Oyalo (2015) technical capacity is the genesis of user satisfaction and this requires that all governance issue relating to technical capacity is adhered to. As it was noted few projects have not been done according to user satisfaction and their sustainability has cast doubt on the technical capacity of the contractors. This indicates that there are governance gaps in the management of the CDF projects which need to be addressed.

Findings on technical capacity are supported by Wanjiru (2013) study which sought to find out influence of technical capacity on performance of CDF projects in Kenya. The study on technical capacity was shown to be crucial for coordinating various activities as well as different stakeholders which influenced performance of CDF projects. This finding is in tandem with Wamuhu (2010) who found out that training in skills and knowledge of basic project management should be emphasized in order to steer projects effectively. On the other hand, Kipsaina (2010) concluded that project implemented' knowledge, skill and attitude influenced performance CDF projects in Emgwcn constituency and that project implementers need to be empowered with the right skills, altitude and knowledge in regard to monitoring and evaluation.

Further to assess the moderating influence of regulatory frameworks in the relationship between technical capacity and effectiveness of CDF projects, a SEM was fitted including the moderator and the interaction variables between the moderator and technical capacity as predictors. Table 7 shows the regression coefficient estimated weights of the SEM fitted. The path coefficients of the estimated model were tested for significance to establish the significance of the causal relationships between the determinants and effective management of projects. The critical ratio of the fitted estimates follows a standard normal distribution thus considers 1.96 as the critical point at 5% level of significance.

|     | Path |    | Estimate | S.E.  | C.R.   | P   |
|-----|------|----|----------|-------|--------|-----|
| PM  | <--- | TC | -1.639   | 0.431 | -3.802 | *** |
| PM  | <--- | XZ | -0.86    | 0.029 | -29.66 | *** |
| PM  | <--- | F  | 1.733    | 0.428 | 4.051  | *** |
| PM1 | <--- | PM | 1        |       |        |     |
| PM2 | <--- | PM | 0.628    | 0.031 | 20.478 | *** |
| PM3 | <--- | PM | 0.588    | 0.033 | 17.663 | *** |
| PM4 | <--- | PM | 0.643    | 0.034 | 18.992 | *** |
| PM5 | <--- | PM | 0.759    | 0.031 | 24.212 | *** |
| PM6 | <--- | PM | 0.759    | 0.035 | 21.607 | *** |
| RF3 | <--- | LF | 0.914    | 0.058 | 15.884 | *** |
| RF4 | <--- | LF | 1        |       |        |     |
| RF2 | <--- | LF | 0.643    | 0.063 | 10.247 | *** |
| TC1 | <--- | TC | 0.68     | 0.056 | 12.075 | *** |
| TC2 | <--- | TC | 0.75     | 0.055 | 13.648 | *** |
| TC3 | <--- | TC | 0.827    | 0.062 | 13.347 | *** |
| TC4 | <--- | TC | 1.015    | 0.065 | 15.729 | *** |
| TC5 | <--- | TC | 1        |       |        |     |
| RF1 | <--- | LF | 0.811    | 0.057 | 14.205 | *** |

Table 7: Regression Weights  
Source: Field Data (2017)



To assess the moderating effect, the significance of the moderator and that of the interaction terms were analyzed. The critical ratios for the estimate of regulatory frameworks (RF) and the interaction term with technical capacity (XZ) were found to be 4.203 and 3.806 respectively. The critical ratios that have an absolute value greater than 1.96 implying significance at 5%.

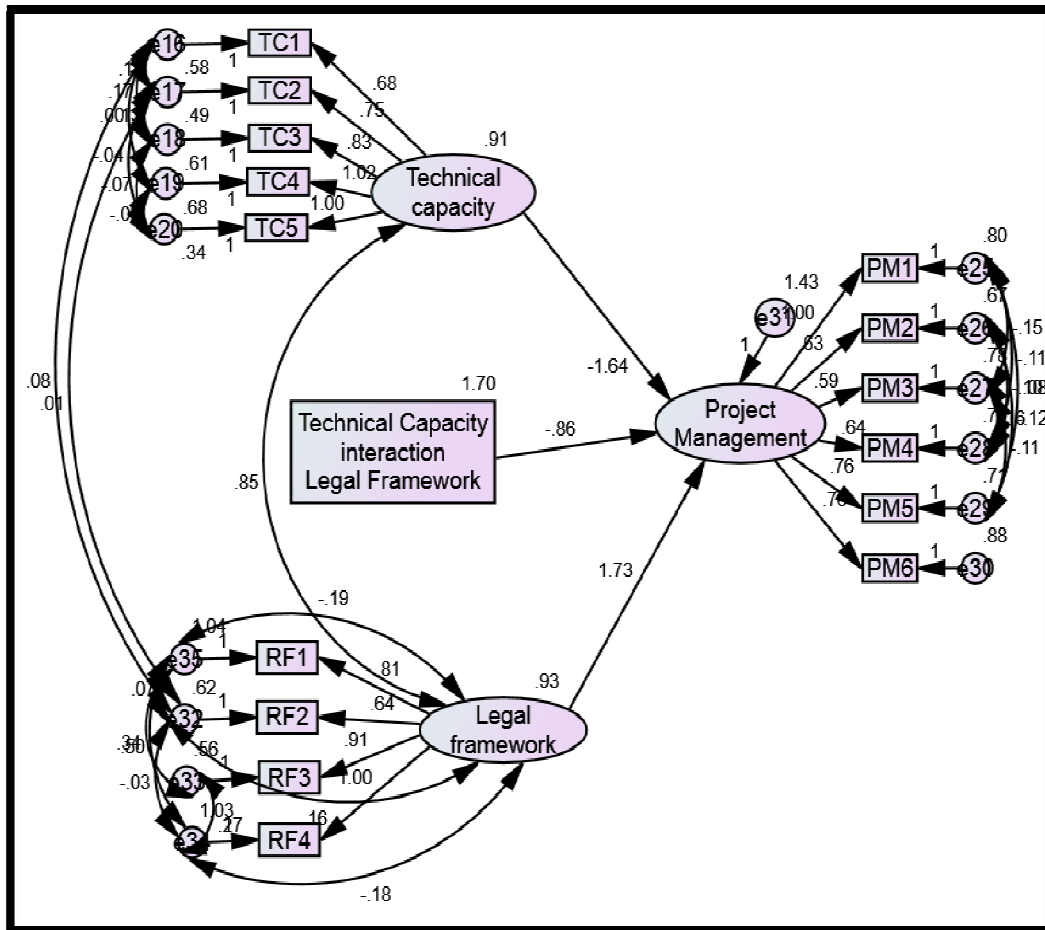


Figure 2: Path Diagram for Model 2 on the Moderating Effect of Legal Frameworks

From the estimates in table 6 and figure 2, it was revealed that the interaction term between technical capacity and regulatory frameworks has a significant regression estimate. This means that regulatory framework significantly influences the relationship between technical capacity and effective management of CDF projects. The null hypothesis was  $H_0$ : Legal frameworks has no significant moderating effect on the relationship between technical capacity and effective project management. The null hypothesis was rejected and a conclusion drawn that Legal frameworks has no significant moderating effect on the relationship between technical capacity and effective project management. The SEM fitted yielded a model that generated the equation below;

- SEM 2:  $\widehat{PM} = -1.639TC - 0.86LF + 1.733TC * LF$

Figure 3 shows a graphical presentation of the moderating effect of legal frameworks on the relationship between effective project management and technical capacity. As shown, low levels of legal frameworks show a gradual positive slope which is causal relationship between technical capacity and effective management of the projects. Increasing the levels of legal frameworks causes a change in the direction of the relationship as shown in the negative slope of the curve between technical capacity and effective project management at medium levels of legal frameworks. The slope keeps decreasing at higher levels of legal frameworks implying that increasing the levels of legal frameworks has a negative moderating effect which decreases the strength of the causal relationship between technical capacity and effective project management. According, Gathoni and Ngugi (2016) insufficient regulatory environment greatly affects the ability to spur performance of NG-CDF funded projects. In their study carried out in Kiambu County, the inadequacy of regulations has impacted negatively on the performance of CDF projects which mirror the findings of this study. Some of the NG-CDF project regulations are not clear. The CDF Act has been revised so many times and as a result it a challenge to track some of the changes. The policies and procedures should be updated as frequent as possible. The only shortcoming of their study was the measure of regulatory environment was not clear.

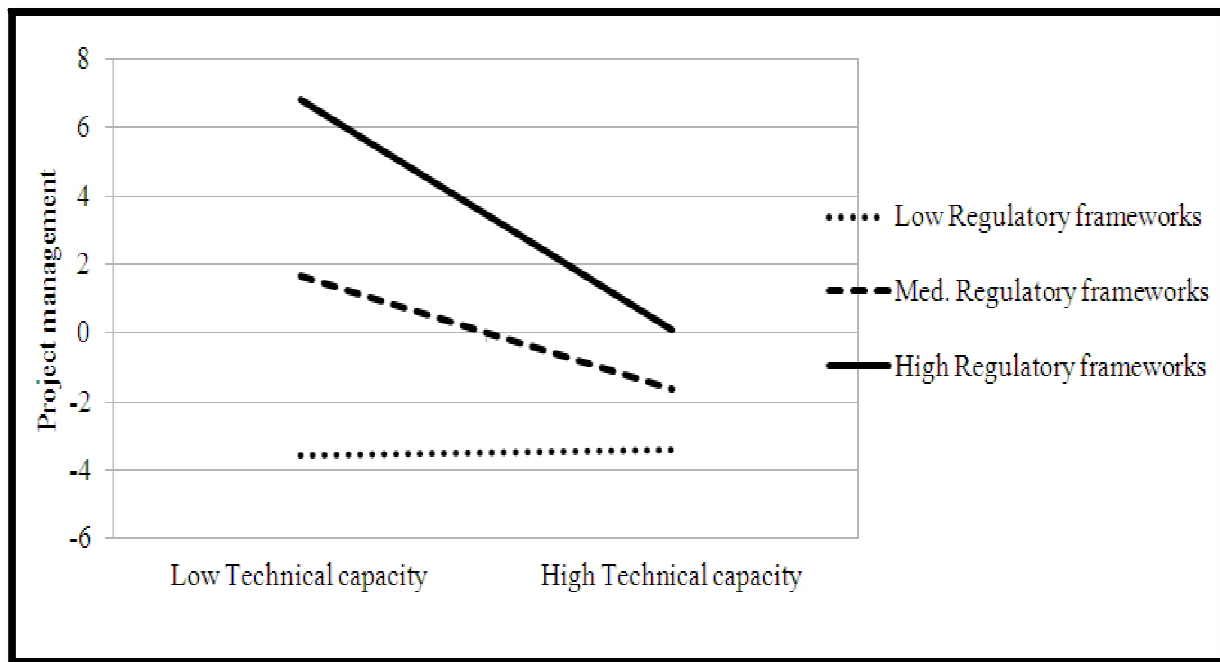


Figure 3: Moderating Effect of Legal Frameworks on Technical Capacity and Effective Project Mgt

## 5. Conclusion and Recommendations

The main objective of the study was to investigate the moderating effect of regulatory framework on the relationship between technical capacity and effective NG - CDF project management in Kasipul Constituency, Homabay County. Based on the findings from structural modelling, the study came up with the following conclusions;

Technical capacity has a significant influence on effective NG - CDF project management in Kasipul Constituency, Homabay County. The coefficient estimates in the SEM fitted had p-values less than 0.05 implying significance. The conclusion therefore shows that technical capacity has a significant influence on effective NG - CDF project management in Kasipul Constituency, Homabay County.

Legal frameworks have a significant moderating effect on the relationship between technical capacity and effective NG - CDF project management in Kasipul Constituency, Homabay County. The main hypothesis was tested using a SEM including the moderating variable and the interaction terms between the moderator and the independent variable (technical capacity). The coefficient estimate for the interaction term was found to be significant with a p-value less than 0.05 implying that legal frameworks has a significant moderating influence on the relationship between technical capacity and effective NG - CDF project management in Kasipul Constituency, Homabay County.

The study recommends that the national government should have adequate regulatory structures to ensure technical requirement are adhered to at constituency level. There is also need for trainings/workshops meant to increase managers' expertise, skills and knowledge of implementing CDF project efficiently. On the other hand, personnel can be increased at the county/constituency level to monitor human resource involved in the management of CDF funded projects, coming up with legislation on the appointment of various stakeholders involved in the management of CDF funded projects who will check on the quality of the projects implemented. Lastly, the CDFC should ensure that their human resource or those contracted met the minimum requirement in terms of experience, skills, academic qualification and expertise in the area of specialization.

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