

# An Investigation of the Adequacy of Monitoring and Evaluation Practice in Public Projects in Kenya

Fredrick Otieno Okuta, Abednego Gwaya, Wanyona Githae

**Abstract:** *The Practice of Monitoring and evaluation (M&E) has become an increasingly important tool within the global efforts in achieving environmental, economic and social sustainability. Monitoring and evaluation (M&E) help those involved with projects to assess if progress is being achieved in line with expectations or not so that reasonable measures can be taken in good time to ensure the project success. While the knowledge on monitoring and evaluation of projects exists, the administrative components of monitoring and evaluation seem to be lacking in the management of county government funded projects. The purpose of this study was to investigate the adequacy of Monitoring and Evaluation in county government funded projects in Kenya. The study investigated the influence of policy, level of planning, resources and the process on the adequacy of monitoring and evaluation exercise in the county government funded projects in Kenya. The study adopted a survey research design and the target population were the county government projects coordination department members. Two completed projects were sampled from each of the 47 counties in Kenya. 72 out of 94 questionnaires sent to the field were returned translating to 76% response rate. The data was analyzed using SPSS version 16 which involved descriptive and inferential statistics. The study established that policies ( $r = 0.604$ ,  $P < 0.01$ ), planning ( $r = 0.596$ ,  $P < 0.01$ ), availability of resources ( $r = 0.815$ ,  $P < 0.01$ ) and process ( $r = 0.889$ ,  $P < 0.01$ ) have a significant influence on the adequacy of monitoring and evaluation of county government funded projects in Kenya*

**Keywords:** *Monitoring, Evaluation, County Government Funded Projects*

## I. INTRODUCTION

Monitoring and evaluation (M&E) are essential components of results-based management (Rist, Boily & Martin, 2011). Results-based management involves deliberately gathering empirical evidence in order to know the extent to which intended results are being achieved so that modifications to the design and delivery of activities can be made to improve and account for performance in achieving intended outcome (Mayne, 2008).

Project controls are aimed at increasing the performance of the project. Kerzner (2013) mentions controlling as a three-step process; measuring progress, evaluating what remains to be done, and Corrective actions to achieve or

exceed the objectives. Project Control mechanisms are being implemented in many industries and sectors today. One such industry is the construction industry. Project monitoring has already been found to be an important contributor towards success of construction projects in India by Iyer and Jha (2006).

Monitoring and evaluation (M&E) help those involved with projects to assess if progress is being achieved in line with expectations. Monitoring is the on-going collection and analysis of data that informs project managers if progress toward established goals is being achieved. While Evaluation is a comprehensive appraisal that looks at the long-term impacts of a project and exposes what worked, what did not, and what should be done differently in future projects. When planning for M&E, it is vital to consider whether appropriate funds and staff time can be allocated to it, since M&E is an on-going process and requires a significant commitment.

In 2010, the promulgation of a new constitution in Kenya saw the devolution of government functions to county government with the devolution of political, fiscal and administrative powers. One of the activities devolved to the county government is the project management function. Previous studies conducted on decentralized CDF fund illustrate that the management of these projects have not been as effective as expected (Wanjiru, 2008; Kamau, 2007; Kaimenyi, 2005). Effective monitoring and evaluation during project implementation are key for the success of a project. While the knowledge on monitoring and evaluation of projects exists, the administrative components of monitoring and evaluation seem to be lacking in the management of county government projects.

There is insufficient information relating to the practice of monitoring and evaluation on projects funded by the county governments. For instance, there are questions as to whether the projects undertaken by the County Governments in Kenya are effectively monitored and evaluated by the relevant county authorities and therefore there is need to investigate the effectiveness of the Monitoring and Evaluation of projects in the counties.

## II. OBJECTIVES OF THE STUDY

- To describe the levels of the adequacy of Monitoring and Evaluation of projects and its explanatory variables
- To establish the relationship between the adequacy of Monitoring and Evaluation of projects and its explanatory variables

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- To establish the challenges in Monitoring and Evaluation of County Government Projects
- To develop a framework for effective Monitoring and Evaluation of County Government projects

### III. RESEARCH HYPOTHESIS

- **HA1:** County Government Policies have a significant influence on the Adequacy of Monitoring and Evaluation of their projects
- **HA2:** Resource Allocation at the County have a significant influence on the Adequacy of Monitoring and Evaluation of their projects
- **HA3:** M&E procedures and process at the County have a significant influence on the Adequacy of Monitoring and Evaluation of the projects
- **HA4:** Planning at the County have a significant influence on the Adequacy of Monitoring and Evaluation of their projects

### IV. RESEARCH METHODOLOGY

This study adopted a survey research method considering the nature of the study. Stratified random sampling technique was used in the selection of two completed projects from each of the 47 counties in Kenya. The respondents in this study were the county government projects coordination department. The data was collected using questionnaires and structured interview schedules that were administered to the respondents. The study adopted both qualitative and quantitative data analysis methods. Descriptive and inferential statistics were both involved in the data analysis for this study. The data was analyzed using SPSS and presented in form of tables, charts and graphs. The following multiple regression model was used in the study;

$$Y = f \{X_1, X_2, X_3, X_4\}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where;

Y= Adequacy of Monitoring and Evaluation (**AME**)

X1= Policies (**PLY**)

X2= Planning (**PLG**)

X3= Resources (**RES**)

X4= Process (**PRS**)

ϵ= Error term

### V. RESEARCH FINDINGS

#### A. Basic Training of the Respondents

The percentage of the respondents in descending order are Engineering at 24%, Architecture at 19%, Construction management at 17%, Quantity Surveying at 11%, Human resource at 8% and Accounting at 7%. Majority of the respondents for in the study consisted of people who have skills in the construction industry hence a better understanding of the exercise of monitoring and evaluation.

#### B. Academic Qualification of the Respondents

Training Area	Frequency	Percentage
Engineering	17	24%
Architecture	14	19%

Construction management	12	17%
Quantity Surveying	10	14%
Project management	8	11%
Accounting	5	7%
Human Resource	6	8%
Total	72	100%

57% of the respondents had bachelor's degree, 17% had Diploma, 14% had master's degree, 7% had Certificates while 6% had Doctoral degrees. Only 24% of the respondents lacked the basic university training

Qualification	Frequency	Percentage
Certificate	5	7%
Diploma	12	17%
Bachelor's Degree	41	57%
Master's degree	10	14%
Doctoral Degree	4	6%
Total	72	100%

#### C. Working Exposure of the Respondents in M&E Exercise

Years	Frequency	Percentage
Up to 5 Years	5	7%
6-10 Years	11	15%
11-15 Years	29	40%
16-20 Years	15	21%
Above 20 Years	12	17%
Total	72	100%

The percentage level of exposure of the respondents in descending order are; 11-15 Years at 40%, 16-20 Years at 21%, Above 20 years of experience at 17%, 6-10 Years at 15% and less than 5 years at 7%. Majority of the respondents in this study had an average of more than 11 years of exposure in monitoring and evaluation exercise. That was an advantage to the research as the respondents were well versed with the monitoring and evaluation at the counties hence providing more accurate answers for the study.

#### D. Descriptive Statistics

The research revealed that the adequacy of monitoring and evaluation had a minimum value of 60% and a maximum value of 80% meaning that the monitoring and evaluation done in the county government projects is generally good hence is said to be adequately done. The predictor variable; policy, planning, resources and process all had minimum values ranging from 50% to 76% meaning that there is need to improve on the monitoring and evaluation policies, planning, resources and process at the county level if the monitoring and evaluation adequacy is to improve in the projects funded by the county governments.



	N	Range	Minimum	Maximum	Std. Deviation	Variance
Adequacy of M&E	72	20	60	80	5.56381	30.956
Policy	72	24	50	74	6.48889	42.106
Planning	72	18	52	70	5.3033	28.125
Resources	72	22	54	76	6.05549	36.669
Process	72	16	53	69	4.91459	24.153
Valid N (list wise)	72					

**E. Correlation Analysis**

		Adequacy of M&E	Policy	Planning	Resources	Process
Adequacy of M&E	Pearson Correlation	1	.604**	.596**	.815**	.889**
	Sig. (2-tailed)		0	0	0	0
Policy	Pearson Correlation	.604**	1	.600**	.633**	.367**
	Sig. (2-tailed)	0		0	0	0.002
Planning	Pearson Correlation	.596**	.600**	1	.798**	.420**
	Sig. (2-tailed)	0	0		0	0
Resources	Pearson Correlation	.815**	.633**	.798**	1	.740**
	Sig. (2-tailed)	0	0	0		0
Process	Pearson Correlation	.889**	.367**	.420**	.740**	1
	Sig. (2-tailed)	0	0.002	0	0	
**. Correlation is significant at the 0.01 level (2-tailed).						

Correlation analysis was conducted in order to determine the direction and the strength of the relationship between the dependent variable and independent variable(s). In this study Pearson correlation coefficient was used to determine the magnitude and the direction of the relationships between the dependent variable and independent variables.

Correlation coefficients were the statistical method utilized to explore the four variables: Policy, Planning, Resources and Process. The correlation between Process and Adequacy of Monitoring and Evaluation was the most significant,  $r = 0.889$ ,  $P < 0.01$  meaning that the predictor variable and the dependent variable both increases in case of a unit increase in the predictor variable.

The correlation between Resources and Adequacy of Monitoring and Evaluation was also significant,  $r = 0.815$ ,  $P < 0.01$  meaning that the predictor variable and the dependent variable both increases in case of a unit increase in the predictor variable. While the correlation between Policy and Adequacy of Monitoring and Evaluation was also significant,  $r = 0.604$ ,  $P < 0.01$  meaning that the predictor variable and the dependent variable both increases in case of a unit increase in the predictor variable.

The correlation between Planning and Adequacy of monitoring and evaluation was also significant at  $r = 0.596$ ,  $P < 0.01$  meaning that the predictor variable and the dependent

variable both increases in case of a unit increase in the predictor variable

**F. Regression Analysis**

This is a measure of the ability of independent variables to predict an outcome of a dependent variable where there is a linear relationship between them. This study used regression analysis to establish whether independent variables predicted the dependent variable.

The R square, t-tests and F tests and Analysis of Variances tests were all generated by SPSS to test the significance of the relationship between the variables under the study and establish the extent to which the predictor variables explained the variation in the dependent variable. Multiple regression model was also generated to determine the effect of moderating variables.

$$Y = f \{X_1, X_2, X_3, X_4\}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where;

Y= Adequacy of Monitoring and Evaluation (AME)

X1= Policies (PLY)

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X4= Process (PRS)

€= Error term

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Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.943 <sup>a</sup>	0.889	0.883	1.90419
a. Predictors: (Constant), Process, Policy, Planning, Resources				

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the of variation in the dependent variable (Adequacy of Monitoring and Evaluation)

that is explained by all the four independent variables (Policies, Planning, Resources tools and Processes). The four independent variables that were studied, explain 94.3% of the effects of the independent variables on the adequacy of monitoring and evaluation of county government funded projects as represented by the R<sup>2</sup> which means that other factors not studied in this research contribute 5.7% of the effects of the independent variables on the adequacy of monitoring and evaluation. Therefore, further research should be conducted to investigate the other factors influencing the adequacy of monitoring and evaluation (5.7%).

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1954.937	4	488.734	134.78	.000 <sup>a</sup>
	Residual	242.938	67	3.626		
	Total	2197.875	71			
a. Predictors: (Constant), Process, Policy, Planning, Resources						
b. Dependent Variable: Adequacy of M&E						

Study findings in ANOVA table indicated that the coefficient of determination was significant as evidence of F ratio of 134.78 with p value 0.000<0.05 (level of significance). Thus, the model was fit to predict the adequacy of monitoring and evaluation of county government funded projects using Policies, Planning, Resources and the Processes

## G. Hypothesis Testing

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.404	3.698		-1.191	0.238
	Policy	0.215	0.046	0.251	4.644	0
	Planning	0.132	0.079	0.126	1.68	0.008
	Resources	0.012	0.097	0.013	0.123	0.002
	Process	0.831	0.076	0.734	10.944	0
a. Dependent Variable: Adequacy of M&E						

The first hypothesis of the study stated that there is a significant relationship between County government policies and the adequacy of monitoring and evaluation of projects funded by the counties.

Findings in the table above showed that County government policies had coefficients of estimate which was  $\beta_1 = 0.215$  (p-value=0.000 which is less than  $\alpha=0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between County government policies and the adequacy of monitoring and evaluation of county government funded projects in Kenya.

This suggests that there is up to 0.215 unit increase in the adequacy of monitoring and evaluation for each unit improvement in the County government policies. Furthermore, the effect of monitoring techniques was stated by the t-test value =4.65 which implies that the standard error associated with the parameter is more than the effect of the parameter.

The second hypothesis of the study stated that there is a significant relationship between County government Planning

and the adequacy of monitoring and evaluation of projects funded by the counties.

Findings in the table above showed that County government planning had coefficients of estimate which was  $\beta_2 = 0.132$  (p-value=0.008 which is less than  $\alpha=0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between County government Planning and the adequacy of monitoring and evaluation of county government funded projects in Kenya.

This suggests that there is up to 0.132 unit increase in the adequacy of monitoring and evaluation for each unit improvement in the County government Planning. Furthermore, the effect of monitoring techniques was stated by the t-test value =1.68 which implies that the standard error associated with the parameter is more than the effect of the parameter.

The third hypothesis of the study stated that there is a significant relationship between County government Resources and the adequacy of monitoring and evaluation of projects funded by the counties.

Findings in the table above showed that County government resources had coefficients of estimate which was  $\beta_3 = 0.012$  (p-value=0.002 which is less than  $\alpha=0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between County government Resources and the adequacy of monitoring and evaluation of county government funded projects in Kenya.

This suggests that there is up to 0.012 unit increase in the adequacy of monitoring and evaluation for each unit improvement in the County government Resource. Furthermore, the effect of monitoring techniques was stated by the t-test value =0.123 which implies that the standard error associated with the parameter is more than the effect of the parameter.

The fourth hypothesis of the study stated that there is a significant relationship between County government Processes and the adequacy of monitoring and evaluation of projects funded by the counties.

Findings in the table above showed that County government Processes had coefficients of estimate which was  $\beta_4 = 0.831$  (p-value=0.000 which is less than  $\alpha=0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between County government processes and the adequacy of monitoring and evaluation of county government funded projects in Kenya.

This suggests that there is up to 0.831 unit increase in the adequacy of monitoring and evaluation for each unit improvement in the County government processes. Furthermore, the effect of monitoring techniques was stated by the t-test value =10.94 which implies that the standard error associated with the parameter is more than the effect of the parameter.

#### H. Discussion of the Findings

The results of the analysis have revealed that Planning had a positive and significant effect on the adequacy of monitoring and evaluation of county government funded projects in Kenya. The existing literature (Naoum, Fong & Walker, 2004; Ling & Chan, 2002; Thomas, Macken, Chung & Kim, 2002; Naoum 1991) had indicated that monitoring planning is a key tool that stakeholders use to ensure the success of projects.

The results are also supported by Faniran, Love and Smith (2000) who describe monitoring planning as the systematic arrangement of project resources in such a way that it leads to achievement of project objectives. Considering monitoring and evaluation as a project, the success of monitoring and evaluation of projects is highly attributable to the levels of planning at the by the monitoring and evaluation team

There is a positive and significant relationship between the level of county government resources for monitoring and evaluation and the adequacy of monitoring and evaluation of its projects. Congregate to the results, from the results by World Bank, (2012) it revealed that monitoring human resource management is key in maintaining and retaining a stable monitoring staff which contributes to project success.

Further support to the study findings is by Sahlin-Andersson and Söderholm (2002) who echoed that the flow of information is vital for the success of such project or organization. In a similar vein, ineffective, poor or lack of communication can lead to a series of problems within project performance (Momballou, 2006).

The results of the analysis have also revealed that the county government policies have a significant influence on the effectiveness of monitoring and evaluation of county government funded projects in Kenya. Favorable policies will eventually lead to a more effective process and therefore the county government must check on its policies and benchmark with the other counties to ensure the success of its projects

Finally, the study has also established that the processes and the procedures of executing monitoring and evaluation in the county government projects also has a significant influence on the effectiveness of monitoring and evaluation of the projects.

## VI. CONCLUSIONS

The study concluded that; Monitoring and Evaluation done in the county government projects is fairly good in most of the counties in Kenya however this can be improved if the county government monitoring and evaluation policies are improved, the level of planning, resources and process of monitoring and evaluation is improved since the research revealed that the four predictor variables explains 94% of the overall performance of monitoring and evaluation of projects funded by the county governments in Kenya.

## RECOMMENDATIONS

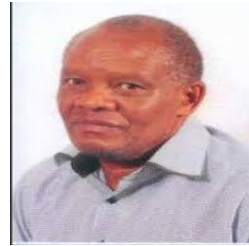
The research established that the predictor variable; Policy, Planning, Resources and Processes have a significant influence on the effectiveness of Monitoring and Evaluation of the projects funded by the county government in Kenya. The research therefore recommends the following;

- i. A policy framework for Monitoring and Evaluation of public projects in Kenya to guide the process of Monitoring and Evaluation. The framework will ensure that every county does adequate Monitoring and Evaluation which will eventually boost the performance of the projects
- ii. Currently, the county government projects in Kenya are handled by the public works. Most of the counties do not have well equipped Monitoring and Evaluation units considering the counties were created just the other day after the promulgation of the new constitution in 2010 in Kenya. The research recommends the creation of functional Monitoring and Evaluation units in every county which should be integrated into the current public works. The department will be purely in charge of Monitoring and Evaluation of the projects
- iii. An ICT system to support Monitoring and Evaluation exercise should be acquired by the counties in Kenya since the research discovered that the Monitoring and Evaluation exercise in the counties still employs the use of traditional approaches

## RECOMMENDATION FOR FURTHER STUDY

The research indicated that the predictor variables; policy, planning, resources and processes account for 94% influence on the dependent variable; adequacy of Monitoring and Evaluation of county government funded projects in Kenya.

The research recommends further study on the other factors that contributes to the remaining 6% of the dependent variable. The study also recommends further study on a functional framework for county government policies to be adopted by the county government monitoring and evaluation units in Kenya



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## REFERENCES

1. Mayne, J. (2008) Building an evaluative culture for effective evaluation and results management. ILAC Brief (20) 4 p.
2. Rist, Ray C.; Boily, Marie-Helene; Martin, Frederic. 2011. Influencing Change: Building Evaluation Capacity to Strengthen Governance.
3. Kerzner, Harold. Project management: a systems approach to planning, scheduling, and controlling. John Wiley & Sons, 2013.
4. Jha, K. N., & Iyer, K. C. (2006). Critical determinants of project coordination. *International Journal of Project Management*, 24(4), 314-322.
5. Kaimenyi, K. (2005). Efficiency and Efficacy of Kenya's Constituency Development Fund: Theory and Evidence. University of Connecticut Press.
6. Kamau, K. (2007). Kenya: CDF Litmus Test for MP Re-election Performance. Open Society Initiative for East Africa. Nairobi: Kenya Government Printers.
7. Wanjiru, G. (2008). The CDF Social Audit Guide: A Guide Handbook for Communities. Nairobi: Open Society Initiative in East Africa
8. Naoum, S., Fong, D. & Walker, G., (2004). Critical success factors in project management; in proceedings of International Symposium on Globalization and Construction, Thailand.
9. Ling, F.Y. & Chan, S.L., (2002). Performance evaluation of alternative project procurement methods. Research brief. National University of Singapore.
10. Faniran, O. O, Love, P. E. D., & Smith, J., (2000). Effective Front-End Project Management A Key-Element in Achieving Project Success in Developing Countries, 2nd International Conference on construction in Developing Countries: Challenges facing the construction industry in developing countries.
11. World Bank, (2012). Monitoring and Evaluation: Some tools, methods and approaches. The World Bank Washington, D.C.
12. Sahlin-Andersson, K., (2002). The Social Construction of Projects. A Case Study of Organizing an Extraordinary Building Project the Stockholm Globe Arena. *Scandinavian Housing & Planning Research*, Vol. 9, pp. 65-78.
13. Momballou, Kimberly A., (2006) The Creation of a Communication Guide for the Project Manager Implementing a Student Information System. *Seton Hall University Dissertations and Theses (ETDs)*. 2415.



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