Monitoring and Evaluation planning and its influence on performance of Agricultural projects in Makueni County, Kenya

Corresponding Author: Anthony Ndirangu Kihiu[1]

Email Addres:integratedacademicconsultant@gmail.com

andirangu26@gmail.com

Contact:0724673428/0708805682

Post address: +254724673428-00800

Lucy Ngugi Wanjiru[2]

Email address:kamau.lucyw@ku.ac.ke

Contact:0721271603

School: Business

Postal addres:43844-00100

Department: Business, Economics and Tourism

Institution: Kenyatta university

Address:43844-00100, Nairobi, Kenya

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List of Declarations

Ethics approval and consent to participate

Ethical issues that were considered included: acquisition of informed consent from all participants, seeking the consent of Program Managers, Monitoring &Evaluation Officers and Project Field Officers thus protecting the anonymity and confidentiality of respondents, guaranteeing the physical and psychological security of participants, giving room for participants to withdraw at any stage, and observing honesty.

Consent for publication

The author sought permission to publish his work with future business by first registering as well as following all their guidelines.

Availability of data and material

The original study data is included in this article. Further inquiries can be directed to the corresponding author.

Competing interests

The authors declare that there is no conflict of interest regarding the publication of this paper

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ABSTRACT

Projects are crucial vehicles used by policy makers and donors in development across the globe. In the last few years, government and donors have established Agricultural Programs in a bid to address food security issues. Unfortunately, the performance of these projects has been wanting; it is normal for projects to be finished late and overspending plan by up to 50 percent-100 percent while others don't meet the targets, this is despite some of them having monitoring and evaluation practices in place. In light of this the present paper aimed at assessing the influence of M & E planning on performance of Agricultural projects in Makueni County, Kenya. The study found that adequate budget for M & E improved project performance and having M & E work plans and frameworks that guides the M & E work has an influence on project performance.

Keywords: *M & E planning, budget for M & E, Agricultural projects*

1.0 INTRODUCTION

1.1 Background of the Study

Projects are crucial vehicles used by policy makers and donors in development across the globe. Resources are channeled through many avenues to improve standards of living in the world in areas such as agriculture, health care education and food security. There has been significant investment in agricultural projects by both developing and developed countries. According to Mrema, Baker, and Kahan (2018) the ministry of agriculture in some countries like U.S.A. emphasizes performance of Agricultural projects.

Developing countries have realized the importance that agriculture projects in improving the lives of inhabitants. According to Landau (2016), countries like Ghana have allocated many resources towards improving performance of agricultural projects. Sekandi and Chen (2015) also confirmed this in their appraisal report for area-based agricultural modernization in which they stated that growth of agricultural are pivotal in reducing poverty.

Kenya's economy just like the rest of Africa depends heavily on the agriculture sector and the development of other sectors is based on this sector (Republic of Kenya National Development plan, 2016). This means therefore that any sustainable projects in the country aimed at improving food security and reducing poverty should be in the agricultural sector (Burke, 2016). However, with major reduction experienced in production after the election related violence of 2008, agriculture performance has remained unstable (Ministry of Agriculture report, 2011). According to Gautam & Anderson (2016), the performance of agricultural programs in Kenya has been a controversial subject with accusations that project systems have been inflexible with a top down approach and have majorly contributed to a poor performing agricultural sector (ROK ,2015).

In rural Kenya, like Makueni, subsistence farming is the major economic activity for 70 per cent of the population. Crops planted include pigeon pea, green gram, sorghum, beans, maize and mangos,) and livestock (IFAD, 2017; Wong et al., 2016). Livestock kept include poultry, beef & dairy cattle and goats), fish farming and rearing of bees. Despite reliance on agriculture, productivity was found to be reducing steadily by approximately 15kg/acre per year in the period from 1994 to 2008 (Mumo et al., 2018; Omoyo et al., 2015). This decline in agrarian productivity was because of changing climate such as reduction in seasonal rainfall and rising temperatures (Mumo et al., 2018). Unfortunately, the reduction is projected to continue and hence the need for agricultural projects in the county.

Hwang and Lim (2013) carried out research in which they sort to establish the influence of fund management, activity scheduling, Monitoring and evaluating Practices on a projects performance. The conclusion was that all these factors had a significant effect on how successful a project would be and M&E was a major one. Ika et al., (2018) used regression analysis to determine how important and positive the association between key

achievement criteria and project execution is. Institutional setting, project coordination and design, and training are only a few examples. The results showed that both monitoring and design are the most important project success factors for project supervisors, confirming its importance in project success.

Several studies show that using monitoring and assessment techniques contributes to succeeding of projects (Amponsah, 2015: & Ika, Diallo &Thuillier, 2019). Various studies investigated various M&E procedures and how they impact projects in agriculture and it is clear that they are quite valuable throughout project execution, resulting in project success (Waithera & Wanyoike, 2015). Project teams must use a system of M&E throughout the cycle of a project to identify strengths and weaknesses so that appropriate corrective and preventive actions may be taken and therefore cannot be avoided (Wangechi, 2018).

Research by Kamau & Mohamed, (2015) noted that there is a significant number of failed government/ donors funded projects. This is despite these projects generally going through the important monitoring and evaluation processes, as required by law in some cases. This is astounding considering the agreement among researchers that legitimate monitoring and evaluation prompts project achievement and hence need for further research.

1.2 Statement of the Problem

Farming accounts for 24% of the total national output (Gross domestic product) of Kenya and utilizes more than 70% of the nation workforce as per the Kenya Agricultural Sector Development Strategy (2009-2020) report (Irungu, 2020). This has seen a lot investment by both the GOK and donors in Agricultural projects. However, the success rate of agricultural related project has been far from impressive at between 30 and 50 percent (NALEP, 2019).

In Makueni County, some of the programs started by both non-governmental organizations (NGOs) and county government in the period 2013-2020 had a mixed bag of results with both success and failure while some programs registered success, others did not meet their full objectives, with some running over the budget and others facing delayed implementation (MOALF 2020). Despite these interventions, a larger portion of population still suffers from poverty and starvation with the county experiencing high levels of poverty at 34.8 per cent (KIHBS 2020/2022). This is related to elements including inadequate market information and market linkages, low productivity in crops and livestock, low adoption of technologies and research., limited access to credit, institutional frameworks on agricultural, inadequate policy, legal and land tenure, poor governance and management of co-operatives and insecure land tenure system. Poor agricultural productivity has resulted in food poverty rates at 57%, translating to high malnutrition rates of 37 %(GoK, 2020).

Studies done globally and locally have generally agreed that monitoring and evaluation contributes greatly towards project performance (Simiyu, 2015; Prabhakar, 2016; Hwang & Lim 2013; Ngatia, 2017). Therefore, according to PMBOK (2001) and various studies done, monitoring and evaluation appears to be a substantial contributor to project success. According to Youn, (2016) however, many agricultural projects do not perform as expected and are either finished late with over spending and others stay uncompleted with no reasonable responsibility, despite there being monitoring and evaluation systems in place. There is also limited research on the effect of M & E practices on agricultural projects performance. This has therefore created a need to further investigate how monitoring evaluation practices influence the performance of agricultural projects in Makueni County.

1.3 Objective of the Study

To determine the influence of monitoring and evaluation planning on performance of Agricultural projects in Makueni County, Kenya.

2.0 LITERATURE REVIEW

2..1 Contingency Theory

The contingency theory of leadership was developed by Austrian physician Fred Edward Fiedler in his seminal 1964 essay, "A Contingency Model of Leadership Effectiveness." Contingency theory supports environmental dynamism (Lawrence & Lorsch, 1967). The Contingency Theory was created during his research of leader effectiveness in-group circumstances; that one's ampleness to lead relied upon their control of the situation and the design of power. A fundamental attestation of the contingency hypothesis is that the environment in which it operates determines the decision on the best way for an organization to organize itself.

Environmental dynamism, according to Dess and Beard (2015), contrasts between environmental change's rate of change and its unpredictable nature by dealing with absence of pattern and unpredictability. Porter's (1980) five forces model of industrial economics provides dimensions for departure borders, relative control over customers and the risks posed by rivalry. Eisenhardt and Martin (2014) defined environmental dynamism in

terms of either extremely dynamic markets or moderately dynamic markets. They made the rational argument distinctive markets are those in which change occurs as frequently as feasible but pursues predictable and straightforward methods. On the other hand, they argued that when markets are highly distinctive, changes wind up being nonlinear and less unexpected. The purpose of the contingency theory is to match the pioneer's style with an appropriate setting, not to have the pioneer adapt to a scenario. Finding out a pioneer's approach is crucial for making the most of this notion (Gupta, 2016). Authoritative conduct can be utilized to survey, direct and expect conduct of specialists with the objective that societies can more likely see how to move individuals. There are situational components that can affect the examination of authoritative conduct and its expectation of the conduct of workers. According to the contingency theory, specific situational elements can have an impact on the coordinate link among independent and subordinate factors while studying organizational behavior. This theory`s feature that postulates that there exists no best way of organizing a firm must make decisions, yet the decision is based on both internal and external factors, thus, this model is significant to the study because it explains the impact of M&E planning on agricultural project performance in Makueni County.

2.2 Planning for M & E and Project Performance

As per a review directed by World Bank (2016) and Mackay in Washington, M & E planning is a basic driver in improving the achievement of government programs. Yang, Huang and Wu (2016) conducted an investigation on the link on project preparation and accomplishment. This study used questionnaires to assess the project's scope, budget, and the project manager's management style, and quality in addition to client contentment. This research`s results displayed that enhanced project planning and team dynamics result from improved project management leaderships that influence project performance. The investigation also discovered that the presence of a strong sense of teamwork affects project success statistically. Wabwoba and Wakhungu (2018) carried an investigation to determine how sustainability and proprietorship of projects is improved by M&E planning and implementation. The study utilized evaluation research design and key participants were identified using purposive sampling from project groups' crucial stakeholder organizations. The study results were that monitoring & evaluation planning improves comprehension of how to manage the project cycle of County Maternal health projects and how achievements will be measured and so the extent of performance.

Mugo and Oleche (2015) in a study done in Kenya, sought to understand if budgetary allocation for M & E among other variables play a fundamental role in terms of realization of a project success. The investigation utilized a diverse study method and used the profit model with data collected from employees in the Ministry of Devolution and Planning using questionnaires. At a 95% confidence level, the study found a favorable association concerning M&E budgets provided and the implementation of M&E frameworks in expansion of projects. Agreeing with the findings of Arnold and Gillenkirch (2015) that found out that negotiated budgets for planning and performance evaluation had positive effective on M&E and Project performance. His recommendation therefore was that institutions should continue investing in the improvement of M&E in terms of budgetary allocation. As indicated by Brignall and Modell (2010), there are some essential contemplations for an M&E plan like assignment of assets/how much cash and duration will be expected to direct the activities.

Nalianya (2017) did a study of maternal health projects in Bungoma undertaken by non-governmental organizations. The researchers used a correlation design for a descriptive survey. The conclusion was that the performance of the undertakings was impacted by M&E work plans with a strong correlation of 0.607. This is because the process of assessment and progress reporting is informed by the M&E work plan that contributes towards achieving project outputs and outcomes. M&E work plan details the indicators, the individual liable for gathering them, what practices and structures will be utilized, and how the information will course through the organization (Taylor, 2011). The study concentrated on maternal health projects in Bungoma County and, and might not be applicable in agricultural projects in Makueni creating a need for further study.

A study by Kihuha, (2018) on how M&E practices affect performance of projects, had very interesting findings. A s big percentage of the participants did not admit that top management participation in the M&E planning enhanced process of evaluation or acceptability of the results. A small number in any case concurred that participation of management in M&E planning guaranteed possession, grasping and maintainability of outcomes and improved evaluation process credibility and expanded acknowledgment of assessment discoveries at 18% and 35% respectively. Data collection was done using questionnaire from the entire populace of employees at UNEP GEF projects. SPSS was utilized in examination of data while to measure the association of the variables, logistic regression model employed.

A study by Phiri (2015) revealed a factually critical association between project performance and M&E planning and training, with coefficients of 0.8 and 0.7, respectively. When compared to the other activities of M&E, performance of a project and M&E planning displayed the most noteworthy measure of positive relationship. Meaning respondents considered planning as the most crucial aspect of the M&E activities. This is because, before a project starts, acceptable performance pointers are selected and a schedule of collecting data developed during M&E planning. Further saying that it is also during the planning process that it is determined

how data will be analyzed in order to show project performance. This ensures that every aspect that would enhance project performance is covered during the planning stage. This investigation focused on only one university as a case study and therefore expanding it to include projects implemented by County Governments and Non-Governmental organizations would bridge that gap.

3.0 MATERIALS AND METHODS

3.1 Introduction

3.2 Research Design

Descriptive and explanatory survey research design were applied to study the research problem. The design is chosen in consideration the objective of the research. Descriptive research design allows capture of situation as they as of now exist without control of factors under study (Cooper & Schindler 2012). Explanatory research design on the other hand investigates relationships between variables and tries to explain the reason of the relationships including because effect relationships (Saunders, 2014). This review configuration was zero in on acquiring subjective and quantitative information from project staff and managers.

3.3 Target Population

Populace alludes to the complete group of organizations; events or people targeted for research (Creswell & Creswell, 2014). The target population for this study comprised fourteen Agriculture projects being implemented by various organizations with 125 respondents that included, program managers, project field officers, and M&E officers, distributed as follows:

Table 1: Showing the Number and Categories of Individuals Targeted

Agricultural Project implemented by	Program Managers	M&E Officers	Project Field Officers	Frequency	Percent
Utooni Development	1	1	4	6	5%
Kenya Agricultural and Livestock Research Organization (KALRO)	1	2	8	11	9%
Transform Aid International,	1	2	5	8	6%
MoA (Ministry of Agriculture)	1	2	6	9	7%
KRC (Kenya Red Cross)	1	3	9	13	10%
KARI (Kenya Agricultural Research Institute)	1	2	6	9	7%
WVK (World Vision Kenya)	1	3	10	14	11%
AH (Africa Harvest)	1	2	6	9	7%
ICRISAT (International Crop Research Institute for Semi-Arid Tropics)	1	1	3	5	4%
Alliance for a Green Revolution in Africa (AGRA),	1	3	7	11	9%
Farm Care	1	1	3	5	4%
Christian Aid	1	2	6	9	7%
Business Initiative for Survival and Eradication of Poverty (BISEP)	1	2	5	8	6%
Pathways to Resilience in Semi-Arid Economies (PRISE).	1	1	6	8	6%
Total	14	27	84	125	100 %

Source: Researcher (2022)

3.5 Data Collection Instruments

To collect primary data, self-administered questionnaires with both closed-ended and open-ended items were utilized. While open ended questions permitted the members to give more point-by-point reactions, the close ended were restricted which made it easier to analyze (Saunders ,2014). Questionnaires were the ideal instruments for data collection since they are easier to analyze and conserve resources and time.

3.9 Data Collection Procedures

Using a letter of introduction from Kenyatta University, a study permit was acquired from National Commission for Science, Technology and Innovation. Questionnaires were shared with the respondents by email and

responses sort within a specific time to obtain well thought answers from them. Permission for data collection was gathered from the respective County Education Office and County Commissioner's Office. The introductory letter was utilized to enable the researcher go-ahead to continue doing research in the sub- County in addition to administer structured questionnaires to the targeted respondent. Questionnaires were self-administered. The researcher also informed the respondents at least two days' prior before sharing the questionnaires. Secondary data was obtained from documented government records, internet searches, and NGOs council.

3.10 Data Analysis and Presentation

The data gathered was then cleaned, that involved filtering and sorting of the data followed by the coding, entering and investigation of the data using statistics software (SPSS, Version 25.0).

The qualitative data collected by open-ended questions was examined thematically with themes created according to variables being studied and results presented using tables.

Analyses of quantitative data were conducted using means and descriptive statistics including frequencies, percentages, and standard deviation.

Multiple linear regression models were used in additional inferential research to determine the connection between M&E practices and project performance

Multiple Regression Model Equation

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

Where: - Y= Performance of Agriculture Program

β_0=constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficients

X_1= Planning for M&E

X_2= Stakeholders' engagement in M&E

X_3= Capacity building for M&E

X_4= Data management for M&E

ε=Error Term

4.0 RESULTS AND DISCUSSION

Table 2: Response Rate

Source: Study data (2022)

Category	F Frequency	Percentage
Responses	90	95.74%
Non-responses	4	4.26%
Total	94	100%

4.5.1 Planning for monitoring and evaluation and project performance

The results are displayed in Table 4.5.

Table 3: Planning for monitoring and evaluation and project performance

Statements	**Frequent/Percentage**						
	SA	A	U	SD	D	Mean	Std. Dev
The project budget had a distinct and sufficient provision for M&E	71 (78.9)	10(11.1%)	2(2.22%)	5(5.55%)	2(2.22%)	3.3	1.0
Top Management personnel in our organizations fully participated in the M&E Planning	62(68.9%)	12(13.3%)	4(4.44%)	7(7.8%)	5(5.6%)	2.7	1.6

process							
Adequate budget for M&E improved project performance	36(40.0%)	38(42.2%)	5(5.6%)	8(8.9%)	3(3.3%)	3.5	1.7
Conducting trainings with relevant course content for staff as regards the M&E activities resulted in improved project performance	42(46.7%)	33(36.7)	3(3.3%)	8(8.9%)	4(4.4%)	2.6	1.9
Aggregate mean/SD						12.1	6.2

Source: Study Data (2022)

The study revealed that a large number of participants agreed as represented by 90% (78.9% strongly agreed and 11.1% agreed, while 2.22% had neutral say. On other hand, few respondents disagreed as denoted by 7.77% (5.55% strongly disagreed and 2.22% disagreed that he projects budget had a distinct and sufficient provision for M&E and our Project had clear M&E work plans and frameworks that guided the M&E work and the Planning for data collection was done at the planning stage before implementation.

On the second variable many research participants concurred as signified by 82.2% (68.9% strongly agreed, 13.3% agreed. 4.4% were neutral. Whereas 13.4% disagreed (7.8% strongly disagreed and 5.6% disagreed that top Management personnel in our organizations fully participated in the M&E Planning process and the Planning for data collection was done at the planning stage before implementation.

On third variable many research participants agreed as denoted by 82.2% (40.0% strongly agreed,42.2% agreed. 5.6% were of neutral opinions. While 12.2% disagreed (8.9% strongly disagreed and 3.3% disagreed that adequate budget for M&E improved project performance and having M&E work plans and frameworks that guides the M&E work has an influence on project performance.

On last variable many research participants agreed as denoted by 82.95% (46.7% strongly agreed,36.7% agreed. 3.3% were of neutral views. On other hand few respondents disagreed 13.3% (8.9% strongly disagreed and 4.4% disagreed that conducting trainings with relevant course content for staff as regards the M&E activities resulted in improved project performance and top management support in M&E results in better project performance.

The findings indicate that engaging top management in monitoring and evaluation can enhance project performance and adequate budget for M&E also can lead to improved project performance and having M&E work plans and frameworks that guides the M&E work has a bearing on performance of project. Further the findings reveal that having regular training to the staff can go hand in hand with improving performance of agriculture project in Makueni County.

These findings were made loud by an M&E officer who recounted that;

``I have worked for over 7 years in the M&E department, I wish to testify that, our services and undertakings have become successful thanks to the good leadership and effective planning of our projects. ``

Additionally, one of the program managers pinpointed that;

``I wish to indicate that with the vast planning as well as the good management that promotes the effect9ive implementation of the plans we come up with, project performance has often had good outcomes in spite of also depending on other factors like capacity building to enhance its success. ``

The findings collaborate with those of Gillenkirch (2015) that found out that negotiated budgets for planning and performance evaluation had a significant link on M&E and performance of Project. Also, the findings are in line with those of according to Acevedo, Lima, Rivera, and Hwang (2015) who noted that on-the-job training and formal education are both essential for the growth of assessors.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study concluded having effective M& E work plans and engaging top management in monitoring and evaluation can enhance project performance, while adequate budget for M&E also can lead to improved project performance and having M&E work plans and frameworks that guides the M&E work has an influence on project performance. Further the study concluded that having regular training to the staff can go hand in hand with improving performance of agriculture project in Makueni County.

5.2 Recommendations from this study

In order to improve planning on performance of Agricultural projects in Makueni County. The researcher recommend that it is important to develop a comprehensive monitoring and evaluation plan that outlines the data collection methods, indicators, and tools to be used. The plan should also include the frequency of data collection and the roles and responsibilities of the team members involved as it seen to go hand in hand in enhancing agriculture projects performance in Makueni County**.**

5.3 Recommendations for further studies

The paper focused only on influence of monitoring and evaluation planning, therefore, there is a need for another study to be done focusing on other prospects such as challenges for limited use of technology and their on impact agriculture projects performance in Makueni County**.**

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