Monitoring and Evaluation Planning: An Integral Part of Dairy Primary Cooperative Societies' Performance in Murang'a County, Kenya.

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Abstract: *A common hypothesis is that Monitoring & Evaluation is positively associated with project performance. Whereas the number of empirical studies conducted on this topic is remarkable, there is still no agreement on the most influencing Monitoring and Evaluation strategies on the performance of dairy primary cooperative societies (DPCS). In order to further advance knowledge in this field, an empirical study was conducted on M & E strategies influencing performance of Dairy Primary Cooperative Societies in Murang'a County, Kenya. This paper is an extract of the empirical study with a specific focus of M & E planning strategy and performance. A mixed method approach under the pragmatism paradigm was used making use of both cross-sectional and case study designs. The study targeted the dairy primary cooperative societies in Murang'a County through the dairy farmers, M & E team members and the Murang'a County Creameries' Board of management. To gather quantitative data, a structured questionnaire was used on the dairy farmers sampled through a proportionate simple random sampling technique from the target population. The Murang'a County Board of management and M & E team members were purposively sampled to provide qualitative data. The quantitative data were analyzed through descriptive and inferential statistics along with thematic analysis for qualitative data. The study established a positive and significant relationship between M & E planning strategy and performance of the dairy primary cooperative societies studied in Murang'a County. Based on the findings, the study recommends integration of M & E strategies in the development plans of dairy cooperative societies. The county government to observe timely planning for M & E activities at the county level, allocate budget for M & E activities and consider involving the dairy primary cooperative societies' beneficiaries in the M & E planning process. Further studies on M & E planning should be extended to varying context for knowledge expansion.*

Key terms; *Budget Allocation, Monitoring and Evaluation Planning Strategy, Stakeholder involvement, utilization of monitoring and evaluation results*

I. INTRODUCTION

In recent years there has been an expansion of monitoring and evaluation activities within community-based organizations. Monitoring and Evaluation is a management tool that can be used to help improve the performance level of projects and programs by reducing the cycle times (Barrett, 2008; Kirsten, 2010). Successful M & E process is dependent on effectual planning. The success of any program or project is associated with the initial planning process. However, most of the business managers make a mistake of not involving members of their projects team in the M & E planning process and in the conceptual meetings. It is at the planning stage of M & E where diverse stakeholders' interest is represented on the basis of their stake in the outcome of the M & E process. Therefore, project designers should align all the M & E activities into the project plan including persons to conduct the M & E, budget for the activities as well as the specification on how to report and use the findings.

Monitoring and evaluation planning strategy is recognized as one of the key apparatus undertaken to ensure effective monitoring operations. Gyorkos, (2003) commends for an effective monitoring and evaluation process, an initial planning detailing on M & E budget allocation, M & E resource types and sources, M & E technology, stakeholder representative and utilization of the M & E findings is required. It is critical to plan for M & E budget within the overall production cycle, set aside resources enough for M & E activities, develop M & E capacities and involve stakeholders' representatives in planning for M & E to enhance the leaning process for performance of any community-based development initiatives.

The dairy primary cooperative societies are among social development initiatives in Murang'a County. They are centrally managed by the County Government through the Murang'a County Creameries. Monitoring and evaluation of the dairy activities are done by an M & E team controlled by the board of management. This paper reports on the influence of the M & E planning on the performance of the Dairy primary cooperative societies in Murang'a County with a specific focus on M & E budget allocation, stake holders involvement and utilization of the M & E findings.

II. LITERATURE REVIEW

Planning for M & E entails definition of M & E activities, estimating project costs and required resources and deciding on the project stakeholders. The purpose of planning for M & E is to establish and maintain guidelines that define the M & E activities (Kahilu, 2010). This helps determine whether the M & E process is institutionalized within the overall planning and designing stages of the interventions (Crawford & Bryce, 2003). Gyorkos, (2003) advises that project planners should include a clearly delineated M & E plan as an integral part of the overall project plan that include M & E activities, persons to carry out the activities, frequency of activities, sufficient budget for activities and specification on the use of monitoring and evaluation findings. With reference to scholarly literature, performance of projects and programmes likewise, has been widely attributed to effective monitoring and evaluation.

Adequate resources at the initial planning stage should be set aside to ensure quality M & E. The required financial and human resources for M & E should be considered within the overall costs of delivering the agreed results and not as additional costs (Marangu, 2012). Kohli and Chitkara, (2008) suggest that planning for M & E should be done just at the very point of project or program initial planning. It is therefore crucial for monitoring and evaluation professionals to assess the monitoring and evaluation needs when designing and planning for the project in order to allocate funds to the implementation of key monitoring and evaluation tasks. This demonstrates that planning for monitoring and evaluation takes care of all aspects that need to be in place so that there is early detection of progress or lack thereof.

Stakeholder participation throughout the monitoring and evaluation cycle ensures ownership, learning and sustainability of results. Therefore, an effective M & E should be based on participatory approach in budgetary planning, allocation and review (Khake & Worku, 2013). Vanessa and Gala, (2011) argue that involving persons tasked with M & E function in the planning process promotes ownership and improves delivery of project results. In practice the concerned should be cautious in M & E budget allocation plans so that the budget is not too little as to give results that are not accurate and credible, or so big that it interferes with the program. Therefore, planning for monitoring and evaluation strategies should be based on stakeholder needs and expectations to ensure stakeholders' understanding, ownership and utilization of M & E information towards improving performance of their interventions**.**

Involvement of the program beneficiaries in the M & E planning process opens an avenue for ownership of the results. Hauge, (2010) asserts that involving stakeholders in the M & E process gains them confidence and consequently utilize the findings for learning and subsequent improvement of the overall performance. Similarly, Hassan, (2013) contends that a member of a project is seen to be more receptive to the M & E findings in which s/he has participated actively rather on the reported M & E findings. In support of this, a study by Osterberg and Nilsson, (2009) found a significantly higher member disloyalty when members were dissatisfied with their cooperatives' management and decision making process. The stakeholders involved in the planning process for M & E have the idea on how the findings would continue to be relevant to the programs and therefore they should be retained in the M & E process to the end to realize results.

Empirical findings indicate that M & E planning strategy focusing on M & E budgeting, stakeholders' involvement and result utilization is recognized in improving performance of interventions. Much of the reviewed literature has focused on diverse contexts with positive and significant correlations between M & E related variables and performance and therefore, the paper articulates M & E planning strategy for performance of the dairy primary cooperative societies in Murang'a County.

III. METHODOLOGY

The study employed a mixed method approach under pragmatism paradigm. The integration of qualitative and quantitative approaches allowed data and source triangulation for increased data validity. A blend of cross sectional survey and case study designs were used to investigate the influence of M & E planning strategy on performance of the dairy primary cooperative societies in Murang'a County. The study target population was 39,441 DPCS' stakeholders. Based on Naissuma's sample size formula, (2000), a sample size of 270 dairy farmers was selected using a proportionate simple random sampling technique. Three management officials and six M & E team members were purposively selected as the study key informants to reflect diversity and to obtain valuable data through an in-depth interview and focus group discussion respectively.

The study sample size from each of the study target population category is shown in Table 1

Table 1: sample Grid

DPCs stakeholders categories	Target Population	Sample size
Dairy farmers	39,439	270
Management officials	3	3
M & E Team members	6	6
Total	**39,441**	**279**

The primary quantitative data was collected using a structured questionnaire. For primary qualitative data, multiple instruments were used including, an interview, focus group discussion and observation guides together with document analysis for the secondary qualitative data. For accuracy of the qualitative findings, various strategies in line with Creswell and Miller, (2000) were applied; triangulating different data sources of complementary evidence, spending prolonged time in the field and use of a peer debriefer to review the qualitative questions. The reliability of the Likert scale items in the questionnaire was determined using Cronbach Alpha (α) which was used to measure the internal consistency based on the average correlation among the items on the scale.

IV. DATA ANALYSIS AND FINDINGS

A total of 261 usable questionnaires were returned from a total of 270 issued to the dairy farmers during data collection, translating to 96.7 % average return rate. The data on the study variables were analyzed using both descriptive and inferential analyses. A paired sample t test was used to confirm the study hypothesis and also to add meaning to the quantitative data.

4.1 Descriptive data analysis on the performance of Dairy Primary Cooperative Societies in Murang'a County

Performance of the dairy primary cooperative societies (DPCS) in Murang'a County was based on four performance measurement dimensions; consistence in milk delivery, increased dairy farmers' income, increased membership, and satisfaction of the dairy farmers with the operations of the DPCS. The data of the respondents' perception on the DPCS performance were collected from the twelve items under the performance theme based on the 5-point likert scale. Table 3 summaries the frequencies of the respondents' responses.

Table 3: Frequency Distributions of Dairy Farmers' Responses on the Performance of the DPCS

Likert-Scale	Frequency	Percentage
Strongly disagree	0	0.0
Disagree	4	1.5
Neutral	52	19.9
Agree	191	73.2
Strongly agree	13	5.0
Total	261	100.0

Table 3 shows that a total of 78.2 % of the sampled dairy farmers were in agreement with the DPCS performance statements. Among the sampled dairy farmers, 19.9 % remained neutral to the DPCS performance statements, with only 1.5 % in the disagreeing option. Being in agreement with the DPCS performance statements support the fact that the dairy primary cooperative societies were performing as per their laid targets based on the selected performance indicators. Nevertheless, the neutrality of the dairy farmers to the DPCS performance was not by chance or random and therefore could not be ignored. Cowley, (2000) suggests that neutral perception may be an indication that the respondents are less inclined to express their opinion or are without experience of the topic in discussion. For clarity, a further telephone interview with some simple randomly selected dairy farmers was later conducted. Table 4 presents the DPCS descriptive statistics.

Table 4. Dairy primary cooperative societies' performance statistics

	N	Minimum	Maximum	Mean	Std	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Error	Statistic
M & E Planning	261	30.00	60.00	44.27	.244	3.938

With reference to Table 4, the DPCS performance mean score was 44.27 with a standard deviation of 3.938 and a standard error of .224. The standard deviation obtained was relatively small indicating that the respondents response values were clustered around the performance mean.

The qualitative data from the in-depth interview and focus group discussion cross- validated the survey quantitative data. From the management officials, most of the DPCS performance objectives had been notably achieved. However, the dairy farmers through the telephone interview expressed their dissatisfaction with the milk collection and delivery challenges especially in rainy seasons. Their dissatisfaction was also directed to the persistent delays in monthly payments for the milk sold to the cooperative societies.

4.2 Regression analysis of Monitoring and Evaluation planning strategy and performance variables

The relationship, direction, strength and the predictive power of M & E planning strategy of performance were determined through linear correlation and regression analyses at a significant level of 95%. The change in the M & E planning strategy and the percentage variation in the DPCS performance variable explained by the predictor variable were determined using a statistical regression model.

Regression Model: $\mathbf{Y=b_0+b_1X_1+\varepsilon}$, **Where**:

Y is the dependent variable (dairy primary cooperative societies' performance)

$\mathbf{b_0}$ and $\mathbf{b_1}$ are constant/ regression parameters

$\mathbf{X_1}$ is the predictor variable (M & E Planning strategy) and $\boldsymbol{\varepsilon}$ is the error term

The regression outputs are indicated in Table 5.

Table 5: Regression outputs of M & E planning strategy and performance of the DPCS

Model Summary	R	R^2	Adjusted R^2	Un-standardized coefficients		Sig.
				B	Std error	
Constant	.309	0.095	0.092	31.555	2.452	0.000
M&E planning				.330	.063	0.000

F change = (1/260) =21.142; $p < 0.05$ (t (260) = 12.871, $p < 0.05$)

The Pearson correlation coefficient of (r= 0.309, p < 0.05) at 95% significance level was realized, indicating an existence of a statistical significant positive relationship of a medium strength in a two tailed test. The F value of (1/260) =21.142; $p < 0.05$ indicate that a significance of M & E planning strategy model occurred over the dependent variable. The F-ratio was 21.246, which was very unlikely to have happened by chance. This showed that the coefficient of M & E planning strategy was not equal to zero, a proof of an existence of a significant relationship between the two variables. The t-statistic (t (260) = 12.871, $p < 0.05$) was associated with a significance level of 0.000 which was lower than the chosen level of significance of 0.05. The null hypothesis (H_0: $\beta = 0$) that M & E planning strategy regression coefficient was zero when all other predictor coefficients were fixed to zero was therefore rejected. By substituting the beta value to the initial regression model, the following model was obtained.

$$\mathbf{Y = 31.555 + 0.330\ X_1 + \varepsilon}$$

Where X_1 is the M & E Planning strategy

The resulting regression model explained that a unit increase in M & E planning would result to 33.0 % increase in DPCS' performance (y); withholding other M & E influencing factors not of this study interest.

The null hypothesis predicting the relationship between M & E planning strategy and performance of DPCS was tested using a paired-sample t test statistic.. The research hypothesis predicted that there was a significant influence between M & E planning and DPCS in Murang'a County Kenya. The output of the paired-sample t test is displayed in Table 6.

Table 6: Paired Sample T-Test Results for study Hypothesis

	Paired difference							
	Mean	**SD**	**S.E**	**95% confidence**		**t**	**df**	**Sig.(2-tailed)**
				lower	**upper**			
DPCS performance	5.488	4.491	.279	5.240	6.337	20.784	260	.000
M&E-Planning strategy								

The output of Table 6 shows that there was a significant relationship between M & E Planning strategy and performance of the dairy primary cooperative societies of Murang'a County. The t statistics, t (260) = 4.479 and its associated significance level ($p < 0.05$) indicated an existence of a significant correlation between M & E Planning strategy and DPCS' performance. These results to led the rejection of the null hypothesis (H_0: $\beta = 0$) stating that there was no significant relationship between M & E planning strategy and performance of the dairy primary cooperative societies. The alternative hypothesis (H_1: $\beta \neq 0$) stating that M & E planning strategy had a significant influence on the performance of dairy primary cooperative societies in Murang'a County, Kenya was subsequently accepted.

Similarly, the relationship between M & E planning and performance was confirmed by the key informants who asserted that M & E was regarded with equal weight with other management activities and that the M & E findings were frequently used in decision making in presence of stakeholders' representatives. However, the in-depth interview results revealed some loopholes in budget allocation for the M & E activities and in particular inadequacy of finances and delayed subsidies from the County Government. In

addition, the M & E team members through the focus group discussion displayed their concern on the need to improve the M & E capacity for quality, complete and timely communicated data. Generally, the studied respondents posted a similar acknowledgement on the importance of planning and more so on monitoring and evaluation activities which seem to have significance in the performance of the dairy primary cooperative societies in Murang'a County.

According to the sampled M & E team members, M & E planning strategy contributes to the performance of the DPCS in Murang'a County. In particular, involving stakeholders in the planning for M & E activities gained their confidence and attracting more membership in the DPCS; an indicator of improved performance of the dairy primary cooperative societies in Muranga County. In support of these findings, William, (2010) observed that M & E planning and coordination enhance knowledge on the measurements of projects' attainments thus improving the work performance. Similarly, Horton, MacKay, Anderson and Dupleich, (2000) study findings on dairying projects in Netherlands, indicated that planning for M & E financial resource and skilled personnel enhances dairy projects' performance. Jacobs, Barnett, and Ponsford, (2010) advice that beneficiaries should actively participate in M & E activities in order to influence the project process based on their needs and their analysis. The authors reiterate that when participants are involved in the M & E planning process, they gain skills which strengthen their local capacities for planning, problem solving and decision making for improved performance. It is with empirical evidence that a well planned M & E of projects yields results for improved performance.

Monitoring and evaluation planning strategy as an integral part of project performance is supported widely in the literature. Muchelule, Mbawi,and Saada, (2017) studied monitoring and evaluation planning strategy as one of their study predictor variables which correlated positively and significantly with the performance of development projects with a correlation coefficient of 0.562 and *p* value of less than 0.05 at a significant level of 95%. Likewise, a study by Jabaar, (2003) on M & E mechanism was found to correlate positively and significantly with the performance of the sampled dairy cooperatives in Bangladesh. Similar to what has been reported by Ling and Chan, (2002), this study revealed that M & E planning is a key strategy that should be used by the stakeholders to ensure success in their initiatives. The dairy primary cooperative societies should therefore regard M & E planning strategy as one among other established performance contributors with support from the results of the previous empirical studies on related study variables.

V. Discussion

The measurement indicators of the M & E planning strategy variable adopted by the present study have been empirically studied as individual independent variables on performance as noted in the literature reviewed. Most of the results obtained are in consistence with the findings of the current study. (Hwang and Lim, (2013); Gyorkos, (2003): Marangu, (2012); Zaltsman, (2014); Koffi-Tessio, (2002). These scholars among others found a positive significant correlation of M & E budget allocation with performance of studied interventions. In addition, Khake and Worku, (2013) conclude that involving staff tasked with M & E function in project planning and budgeting increases their outcome towards organizational performance. Similarly, Katharine, and John, (2011) confirmed a positive and significance relationship between M&E practices and organizational performance which closely concur with the findings of the present study.

On the other hand, some findings from the reviewed literature were in conflict with the findings of the present study. The results of a study analysis by Muchelule, Mbawi and Saada, (2017) revealed a negative significant relationship between M & E planning strategy and performance of projects in Kenya State Corporations. The context of these studies, the methodology used and the tools of analysis

used may have contributed to the difference in the findings. However, monitoring and evaluation on the progress of interventions has widely been found in literature to support performance and therefore the need for the DPCS in Murang'a County to plan for M & E activities along with other dairying activities. The involvement of the dairy cooperative societies' stakeholders should be encouraged in the planning process and more so in the monitoring and evaluation of the DPCS' activities. From the findings, involvement of the dairy farmers in the planning process would enhance membership enrolment and retention and also increase ownership and loyalty for support and consistent delivery of milk to the DPCS.

Furthermore, allocation of financial resources for monitoring and evaluation process has been found basic to enable adequate and timely collection of quality and complete data which when appropriately utilized translates to improved performance of the DPCS. Consequently, involving persons tasked with M & E function in the M & E budgeting process increases ownership of findings for informed decisions which in total increases performance. It is therefore of much essence to budget for M & E within the overall production cycle, set aside resources enough for M & E activities, involve representative stakeholders in the entire planning process of the DPCS operations and guarantee utilization of the M & E findings for improvement of DPCS' performance.

VI. Recommendation for policy and practice

There is need for the dairy primary cooperative societies to continue sensitizing the dairy farmers within Murang'a County on the benefits of having common milk markets through dairy cooperative societies. The Murang'a County Creameries board of management should ensure adequate and early planning for M & E activities on the operations of the dairy primary cooperative societies and involve the stakeholders in the planning process.

VII. Recommendation for future studies

Considering that the situation of dairy primary cooperative societies in Murang'a County may be different from those of other counties in Kenya, future similar studies should be extended which would also be valuable in broadening understandings of DPCS' monitoring and evaluation strategies and in determining their influence on performance. Further studies in different contexts other than dairy cooperative societies would reveal new insights into the influence of the studied M & E strategies on performance. Extended studies should be conducted to examine how M & E strategies are being conducted in other cooperatives with a view of unearthing of the best M & E practices.

From the study findings, most of the respondents supported the study construct's statements based on the adopted measurement indicators. The study constructs were therefore confirmed to have a positive significant relationship with the performance of DPCS. Some of these measurement indicators include budget allocation, stakeholders' involvement and utilization of M & E findings. There is therefore need to conduct future researches on individual indicators to examine the magnitude of their individual influence on the performance of the dairy primary cooperative societies in Murang'a County.

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