International Journal of Natural Sciences: Current and Future Research Trends (IJNSCFRT)
ISSN (Print) , ISSN (Online)

https://ijnscfrtjournal.isrra.org/index.php/Natural_Sciences_Journal/index

The Relationship Between Monitoring, Evaluation Methods, and the Achievement of a Rwandan Agricultural Project

A Case of Radical Terraces Funded by USAID-HINGA WEZE Project in Nyabihu District (2018-2020)

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Abstract

This study focuses on the evaluation on the relationship between Monitoring, Evaluation Methods, and the Achievement of a Rwandan Agricultural Project. The study aimed at finding out whether the relationship between Monitoring, Evaluation Methods, and the Achievement of a Rwandan Agricultural Project were effective most especially in Radical Terraces funded by USAID-HINGA WEZE Project in Nyabihu District. The design of this study was a quantitative method and correlative research design. Information was obtained from 112 populations (53.6% males to 46.4% females) who have a direct impact and different USAID-Hinga-Weze project stakeholders in Nyabihu district (staff at Kintobo sector, staff at Rurembo sector, village leaders or heads, staffs from District (Nyabihu) and staff's managers and technicians of the project in the district) in addition to project beneficiaries in the same area. Data collection was done by using a questionnaire. Data analyses were made with the support of SPSS version 20. The study's analysis outputs given a moderately favorable association between the M&E plans, methods, resources, and data needed to ensure the efficient use of costs, time management, and quality project outputs for agricultural projects. the study findings have revealed that, free of charge, the project has terraced the plots of beneficiaries, supplied fertilizers, and other opportunities and these could be used for developing and improving their living conditions.

Keywords: *Cost; Time; Quality; stakeholder engagement; Observation and estimation Planning; estimation methods; Observation and estimation resources; Observation and estimation Data.*

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1. Introduction

The huge increase in project work across diverse sectors and industries has been among noteworthy developments in few years for the company [1]. Project help to combat poverty, bad health, and unemployment frequently in areas which are into category of rural of several developing countries and many agricultural projects are being funded by both nations (either rich or developing countries) [2].

In industrialized countries like the US, the government places a great value on the success of agricultural programs overseen by the ministry agriculture development [3] demonstrated that the government policy on agriculture reforms in the United Kingdom was based on basic research that provides scientific proof suggestions based on a comprehensive analysis of current top project performance in various agricultural sectors [4] reminds out that in developing nations such as Ghana, a significant number of resources are allocated to agricultural initiatives to improve performance. The fact that agricultural projects play such an important part in the lives of the individuals who live there contributed to the largest allocation of resources.

In Kenya, the agriculture sector is largely reliant on the country's economy, and the sector acts as a foundation for the development of other industries [5]. Counted to GDP, agriculture contributes 25 % directly and 27 % indirectly through linkages with agro-based and related businesses [6]. More than 75% of the country's workforce is employed in the industry, which also generates 60% of export earnings, 75% of the country's industrial raw inputs, and 40 percent of the government's total revenue. As a result of its importance, the industry has given top priority to agricultural projects. Investing in youth and women groups and then using that money to fund agricultural initiatives is one of the government's approaches. However, the results of these initiatives have fallen short of what was expected [7]. M&E in Africa arose mostly because of observations of the procedures that are used in M&E of other countries, particularly in the United States. As a result, M & E was a comparative latecomer to the African market. The introduction of M&E into Africa has been facilitated mostly by donor initiatives, which have been followed by the introduction of theories and procedures that are predominantly of northern provenance. Transformative social equality M&E popular throughout Africa. Increased transparency and accountability in the organization's activities, he says, M&E illustrate the social transformation that occurs [8]. A stronger M&E system for development projects offers managers, policymakers, and donors' better tools for learning from past mistakes, enhancing actual execution, and re-allocating resources if necessary to better reach the intended population. M&E are two independent sets of tasks that are connected but not similar to one another, although they are frequently referred to as "the same thing." In general, monitoring can be characterized as a continuous function that has as its primary goal to offer management and other key stakeholders early indicators of success, or lack thereof, in the accomplishment of results during an ongoing intervention [8-9].

Rwanda is developing fast to achieve middle-class status, service-based economy from an agriculture-based economy. To achieve this, many projects initiated by the government and non-governmental organizations (NGOs and private sector) were made in the agriculture sector (as the main occupying larger share of the population as main income-generating activity). Due to that, some projects have been failed and others were succeeded. One of the highlighted factors for agriculture project failure [10-14] was poor consideration of M&E's role in process of project implementation.

2. Methods

A quantitative method and correlative research design was used in this study to find out whether the relationship between Monitoring, Evaluation Methods, and the Achievement of a Rwandan Agricultural Project were effective most especially in Radical Terraces funded by USAID-HINGA WEZE Project in Nyabihu District. Information was obtained from 112 populations (53.6% males to 46.4% females) who have a direct impact and different USAID-Hinga-Weze project stakeholders in Nyabihu district (staff at Kintobo sector, staff at Rurembo sector, village leaders or heads, staffs from District (Nyabihu) and staff's managers and technicians of the project in the district) in addition to project beneficiaries in the same area. Data collection was done by using a questionnaire. Statistical analysis using inferential statistics was used considering p-value 0.05 as the level of significance and 95% Confidence Interval (95% CI).

3. Results and Discussion

In this section, data collector has assessed and presented the main findings, which explain the contribution of M&E planning, methods, resources, and data on agricultural projects costs, time, quality, stakeholder engagement, and beneficiary satisfaction performance. The evaluation of this contribution has started respondents' perception on related items assessed (views) and later correlation analysis was made using SPSS version 20 and Pearson correlation from 4 indicators representing independent variable (M&E) to dependent variable (Agriculture project performance).

Table1: Pearson's correlation results.

Correlations

Tested Indicators		**Performance of agricultural projects**
M&E Planning	Pearson Correlation	.598
	Sig. (2-tailed)	.031
	N	112
M&E Methods	Pearson Correlation	.426
	Sig. (2-tailed)	.005
	N	112
M&E Resources	Pearson Correlation	.482
	Sig. (2-tailed)	.015
	N	112
M&E Data	Pearson Correlation	.641
	Sig. (2-tailed)	.032
	N	112

Correlation is significant at the 0.05 level (2-tailed).

Source: Raw data, September 2021

The correlation analysis was ensured using Bivariate Pearson correlation *r*, as explained in chapter three it relays between -1 to +1 to explain whether tested variables are negatively correlated or positively correlated. Each category of correlation may be weak, moderate, or strong as it approaches 1 or 0 (strong to weak). The analysis also has shown whether the existing whether or if the association is significant (yes if it is less or equal to 0.05

and vice versa). The results of the study explain the following in detail: This correlation is statistically significant, as evidenced by the p-value or Sig. (2-tailed) of 0.031, which is less than 0.05. The findings from Table 22 indicate that there is a positive moderate correlation between M&E Planning and the performance of the agriculture project, as indicated by the coefficient of correlation (r=0.598). R=0.426 indicates a positive weak correlation between M&E Methods and project performance in agriculture, and this correlation is statistically significant because the p-value or Significance (two-tailed) equals 0.005 less than the threshold value of 0.05 indicates that the correlation is substantial statistically. There is a positive weak correlation between M&E Resources and performance of Agriculture project as r=0.482 and this correlation is statically significant since p-value or Sig. (2-tailed) equal 0.015 less than 0.05. Based on the r=0.641 correlation coefficient, there is a significant positive correlation between M&E Data and the performance of the agriculture project, and this correlation is statistically significant because of the p-value or Sig. (2-tailed) equals less than 0.05. Data collector rejects the hypothesis "H0: There is no significant link between M&E techniques and the performance of an agricultural project in Rwanda" in favor of the alternative hypothesis considering the aforementioned study findings.

Table 2: Analysing the association between M&E techniques and agricultural project performance using Pearson's correlation formula**.**

Correlations

Tested Variables		M&E Practices	Performance of Agricultural Projects
M&E Practices	Pearson Correlation	1	.536
	Sig. (2-tailed)		.020
	N	112	112
Performance of Agricultural Projects	Pearson Correlation	.536	1
	Sig. (2-tailed)	.020	
	N	112	112

Source: Raw data, 2021

There is a correlation coefficient of 0.536, and a two-tailed significance level (significance) of 0.020, as shown in In general, M&E techniques have a moderately good and significant correlation with the success of agriculture initiatives. The P-value is 0.0200.05, indicating a mathematically important correlation between agricultural project performance M&E.

Table 3: ANOVA for the effect of M&E Planning on the performance of Agricultural project.

ANOVA [a]

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.007	1	.007	.141	.031[b]
	Residual	5.579	110	.051		
	Total	5.586	111			

a. Dependent Variable: Performance of agricultural project

b. Predictors: (Constant), M&E Planning

Table 3's findings demonstrated that the ANOVA statistics showed that the significance (p =.031[b]) was lower than the recommended critical significance of 0.05, which is considered significant. Consequently, the regression model is statistically significant in predicting how M&E planning influence the success of an agricultural project. It was determined that the P-value was less than 0.05 (obtained P-value=.031[b]). As a result, there is a connection between an agricultural project's performance and M&E plans.

The influence of M&E procedures on an agricultural project's performance.

Table 4: Analysis of variance (ANOVA) to see how agricultural project performance is affected by M&E methods.

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.185	1	.185	3.766	.005[b]
	Residual	5.401	110	.049		
	Total	5.586	111			

a. Dependent Variable: Performance of agricultural projects
b. Predictors: (Constant), M&E Methods

ANOVA statistics in Table 4 demonstrated that the significance (p =.005b) was less than the recommended critical significance of 0.05. Because of this, the regression model has a high level of accuracy in predicting how M&E methods will impact agricultural project outcomes. Because the p-value was less than 0.05, the conclusion was reached. As a result, the effectiveness of an agricultural project is linked to the M&E methods used.

The impact of assessment and management resources on the success of an agricultural project

Table 5: Analysis of variance (ANOVA) to determine the influence of evaluation and assessment resources on the effectiveness of an agricultural project.

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.295	1	.295	6.141	.015[b]
	Residual	5.291	110	.048		
	Total	5.586	111			

a. Dependent Variable: Performance of agricultural projects
b. Predictors: (Constant), M&E Resources

When table 5 were analyzed, the ANOVA statistics revealed that the significance (p =.015b) was less than the critical significance of 0.05, which was the required threshold. As a result, the regression model is statistically

significant in terms of predicting how evaluation and assessment resources influence the performance of an agricultural project in terms of crop yield. Because the p-value was less than 0.05 (the obtained P-value was.015b), the study was considered successful. Therefore, there is an association between the availability of M&E resources and the performance of an agri-business.

The impact of M&E data on agricultural project's performance

Table 6: ANOVA to determine the impact of M&E data on an agricultural project's performance

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.009	1	.009	.186	.032[b]
	Residual	5.577	110	.051		
	Total	5.586	111			

a. Dependent Variable: Performance of agricultural projects

a. Predictors: (Constant), M&E Data

ANOVA statistics in Table 6 demonstrated that the significance (p =.032b) was less than the suggested critical significance of 0.05, as shown by the results. Since M&E data impact agricultural project success, the regression model is statistically significant. Given that the p-value was less than or equal to 0.05 As a result, M&E data and an agricultural project's performance are linked.

4. Conclusion

The study findings have revealed that the USAID-HINGA Weze project has ensured proper M&E planning, methods, resources, and effective use of M&E data toward assessment of the performance of goals attainment. The conclusion of the research is relying on the study findings. M&E planning, techniques, resources, and data have been found to have a positive moderate link to agricultural project efficiency in terms of cost utilization, time management, quality project outputs, stakeholder participation, and the satisfaction of beneficiaries. This means that agriculture project performance could not rely only on M&E, but other factors not captured by this study and the M&E could not be ignored. The null hypothesis could not be accepted based on the results. And data collector has proven that the performance of a farming project in Rwanda is significantly affected by M&E procedures.

5. Recommendations

5.1. To USAID-Hinga Weze project Management

The study has shown that M&E are positively correlated to agriculture project performance, but this correlation is not perfect (not r=1), (less than 50% and not statistically significant for all indicators), thus, the study recommends the project management retain good performance in ensuring M&E, but also with recognition of other factors not captured by this study. Here it can be suggested source of revenues as the project remain free of

charge to the beneficiaries.

5.2. To USAID-Hinga Weze project beneficiaries

They are recommended to respect the project's characteristics. This is because, the study findings have revealed that, free of charge, the project has terraced the plots of beneficiaries, supplied fertilizers, and other opportunities, and these could be used for developing and improving their living conditions.

5.3. To other researchers

The major emphasis of this research was on the impact of M&E procedures on the performance of a Rwandan agricultural project. Case of radical terraces funded by USAID-HINGA WEZE project in Nyabihu district 2018-2020. Thus, we recommend other researchers evaluate the gap created or contained by this study develop any other study which can fill that gap. According to the new knowledge will increase in the scientific area. Data collector recommends to other researchers to evaluate the impact of USAID-Hinga Weze on beneficiary's wellbeing.

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