

# Role of Project Management Practices on Performance of Agriculture Projects: A Case of Price II Project in Musanze District, Rwanda (2019-2020)

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## Abstract

This study has been conducted with intention of studying the role of project management practices on the performance of Agriculture projects. An evaluation was needed to find out if the Role of project management practices were effective and whether they really have contribution on performance of agriculture projects in Rwanda and most especially in Musanze district in Price II Project. The design of this study was a descriptive and explanatory design. A sample size of 73 respondents selected according to the formula of Morgan. This sample was chosen since it considered as manageable sample and it was enough to generate the outcomes and to generalize the findings to a bigger population. Data were analyzed by applying statistical methods, (descriptive statistics, Correlations, and regressions analyses). All data have been analyzed using SPSS 20. The findings revealed that Project management practices have a great role to the Performance of agriculture projects and it is implying a strong positive and significant relationship between project management practices' role and performance of agriculture projects because The research concludes that a positive relationship between role of project management practices and performance of agriculture projects have been achieved at a very high extent Therefore, without project management practices, the performance of agriculture projects might be very critical.

**Keywords:** Project Planning; Project financing; Project Execution and Project Monitoring and Evaluation ; Timely completion of Project; Completion with budget; Quality specifications; Targets achieved; customer satisfaction.

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## **1. Introduction**

Agriculture Projects are used as a means of reducing problems of poverty, poor health, and unemployment, which are predominant in rural set up of many developing countries [1-2]. Agriculture performs a substantial position in global financial system, but the overall performance of agriculture region continues to be essential because an estimated of 815 million humans international still tormented by persistent starvation and thousands and thousands more living in poverty a lot extra stays to be finished[2-3]. In growing international locations, the agriculture area is still a long way from excellent, however greater than 800 million humans are undernourished, and poverty and meals lack of confidence persist not handiest in sub-Saharan Africa but even in rising Asian international locations [4-5]. The overall performance of agricultural initiatives varies from one country to another. Based on the findings of a research conducted by Pulse indicates that fewer projects globally are being completed within budget or meeting original goals and business intent and there are essential needs to improving both project and business results. Results show current state of project outcomes as projects completed within original budget constitute 55%, projects completed on time 51%, failed project's budget lost 32%[4]. Many developed and developing countries have invested in agricultural projects[6-7]. Revealed that in some developed countries like U.S.A the government through the ministry of agriculture places a high emphasis on the performance of agriculture projects. According to landau stated that in developing countries like Ghana, there is high resource allocation on agriculture projects to achieve the performance. The high allocation of resources was by the fact that agricultural projects play vital roles in the lives of the inhabitants. Such roles stretch from the enhancement of food security, creation of employment and generation of foreign exchange, the supply of raw materials for an industry which contributes to poverty reduction and supports environmental sustainability among others[8]. Rwanda's economy is heavily dependent on the agriculture sector and the sector serves as the basis for the development of other sectors. The agriculture sector has a direct contribution to Gross Domestic product (GDP) and is the main economic activity in Rwanda with 70% of the population engaged in the sector, and around 72% of the working population employed in agriculture. Whereas the agricultural sector bills for 33% of the country wide GDP. In fashionable, Rwanda's GDP has been growing on the charge of seven% considering 2014. [9-10]. The products most cultivated in Rwanda are plantains, cassava, potatoes, candy potatoes, corn, and dry beans[11].The performing agriculture projects must contribute for resolving the problem that continue to persist and paralyze the agriculture projects[12-14]. The performance, which considered as fundamental and capital involves completing the project on time, within budget, meeting product specifications[13-7]. As Rwanda modernizes into a understanding-based totally financial system, agriculture remains the backbone for sustained monetary increase, imparting excessive high-quality livelihoods, and living standards for the population. In this perspective, Rwanda's agriculture is central for creating growth, jobs, exports, and livelihoods necessary to transform the economy to a knowledge based middle-income economy. As there are many projects which are still failing in developing countries[18-22]. Thus, in Rwanda, the failure of projects in Rwanda is still being critical issue as stated in report of auditor general where public projects have assessed, and the audit identified the cases of delayed and abandoned contracts have continued in public entities. Therefore, this paper has examined project management practices on the performance of agriculture projects using the following indicators: Timely completion of Project, Completion with budget, Quality specifications, Targets achieved, Customer satisfaction.

## 2. Methods

A descriptive and explanatory design was used in this study to find out whether the Role of project management practices were effective and whether they really have contribution on performance of agriculture projects in Rwanda and most especially in Musanze district in Price II Project. A sample size of 73 respondents selected according to the formula of Morgan. Sample was chosen since it considered as manageable sample and it was enough to generate the outcomes and to generalize the findings to a bigger population. Data were analyzed by applying statistical methods, (descriptive statistics, Correlations, and regressions analyses). All data have been analyzed using SPSS 20. 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 is presenting, analyzing, and interpreting the results obtained after investigation done to obtain the results which enabled us to analyze the role of project stakeholders on performance of agriculture projects case of Price II Project; as mentioned above, facts have been accumulated from 73 respondents. The researcher gave the respondents various statements regarding Role of Project management practices in frame of Project planning, Project Financing, Project execution, Project monitoring and evaluation agriculture project performance. The respondents were requested to signify the extent to which they agreed or disagreed with every of the statement. Mean (weighted average) and standard deviation were used to analyze the data. From the findings, the researcher noted that those instances with a mean between 1-1.8 were rated to as having a very low mean to mean that there is less role that project stakeholders have to agriculture project performance, Those instances with a mean between 1.9-2.6 were rated to as having a low mean to mean that There is much less role that undertaking control practices have to agriculture venture performance, the researcher also noted that those instances with a mean between 3.5-4.2 were rated to as having a high mean and this means that there is more role that project management have to agriculture project performance while the researcher noted that those instances with a mean between 4.3-5, were rated to as having a very high mean and this means that there's a completely strong evidence that there is function that mission control practices play to agriculture tasks overall performance.

**Table1:** The role of project planning on performance of agriculture project.

<b>The role of project planning on performance of agriculture project</b>	<b>Mean</b>	<b>SD</b>	<b>Interpretation</b>
Project planning contributes significantly to the Timely completion of Project	4.9	2.659	Agree
Project planning contributes significantly to the Completion with budget	4.2	2.004	Agree
Project planning contributes significantly to the Quality specifications	4.5	1.124	Agree
Project planning contributes significantly to the Targets achieved.	4.4	2.723	Agree
Project planning contributes significantly to the customer satisfaction	4.6	1.127	Agree

**Source: Primary data, September 2021**

From Table 1, It was also noted that all the respondents agreed with the statements regarding project planning and indicated that they had a contribution on Timely completion of Project (Mean=4.9), Completion with budget (Mean=4.2), Quality specifications (Mean=4.5), Targets achieved (Mean=4.4) and customer satisfaction (Mean=4.6). As researcher, the findings of this look at confirmed showed us that All level of agreement of respondents were rated to as having a very high mean and Which means there is a completely study settlement with the assertion via respondents of this observe. This is, has supported by the study made by Gido and Clements in their study[12].

**Table 2:** The role of project Financing on performance of agriculture project.

<b>The role of project Financing on performance of agriculture project</b>	<b>Mean</b>	<b>SD</b>	<b>Interpretation</b>
Project financing contributes significantly to the Timely completion of Project	4.49	1.919	Agree
Project financing contributes significantly to the Completion with budget	4.88	1.234	Agree
Project financing contributes significantly to the Quality specifications	4.96	1.724	Agree
Project financing contributes significantly to the Targets achieved.	4.04	1.323	Agree
Project financing contributes significantly to the customer satisfaction	4.03	1.325	Agree

**Source: primary data, September 2021**

From the analysis on the Table 2 above, it was also noted that all the respondents agreed with the statements regarding Project accomplishment and indicated that they had a contribution on Timely completion of Project (Mean=4.49), Completion with budget (Mean=4.88), Quality specifications (Mean=4.96), Targets achieved. (Mean=4.04), customer satisfaction. (Mean=4.03). As researcher, we confirmed that all their stage of agreement were rated to as having a very high mean and which method there may be a completely strong agreement with the statement because project financing is key element for performance of agriculture projects because farmers need liquidity for financing agriculture investments such as purchase of agriculture inputs, purchasing lands and agricultural equipment that are acquired through source of finance which were loans, grant and contribution of farmers for price II project. This supported by Briquette[13] said that enhanced provision of rural credit score would accelerate agricultural manufacturing and productivity as certainly one of manner of financing a challenge.

From the table above, Completion with budget of Project was ranked as the first with high mean (4.85) however, Targets achieved (4.76) was lined up as the second with mean, Customer satisfaction was disposed as the third was with Mean (4.45) and Quality specifications was ranked as fourth for the mean equal to (3.70), Timely completion of Project was rated as last mean and (3.58). The research findings revealed that Project execution was critical to project performance as it ensured that the plans were put into practice. The 64% of the respondents stipulated that the implementation process was good while 36% designated that the implementation

process was fair. This symbolized that Project implementation have great role to the Agriculture Projects Performance and confirmed that plans activities have been implemented successful. Referring to agriculture projects financed by price II project, there were not deviation of projects the farmers cultivated the selected crops, banks have disbursed loans on time to the accounts of farmers, BDF which had mandate of managing grant has disbursed the grants on time. This has supported by Many authors suggest project execution strategy should be availed by a project team as a direction for effectively performing project activities[14].

**Table 3:** Analyzing the role of project execution on the performance of agriculture projects.

<b>Analyzing the role of project execution on the performance of agriculture projects.</b>	<b>Mean</b>	<b>SD</b>	<b>Interpretation</b>
Project execution contributes significantly to the Timely completion of Project	3.58	1.51	Agree
Project execution contributes significantly to the Completion with budget	4.85	1.44	Agree
Project execution contributes significantly to the Quality specifications	3.70	1.74	Agree
Project execution contributes significantly to the Targets achieved.	4.76	1.33	Agree
Project execution contributes significantly to the Customer satisfaction	4.45	1.42	Agree

**Source: primary data, 2021**

**Table 4:** The role of project monitoring and evaluation on the performance of agriculture of projects.

<b>The role of project monitoring and evaluation on the performance of agriculture of projects.</b>	<b>Mean</b>	<b>SD</b>	<b>Interpretation</b>
Project monitoring and evaluation contributes significantly to the Timely completion of Project	4.72	.45391	Agree
Project monitoring and evaluation contributes significantly to the Completion with budget	4.21	1.00425	Agree
Project monitoring and evaluation contributes significantly to the Quality specifications	4.23	1.18838	Agree
Project monitoring and evaluation contributes significantly to the Targets achieved.	4.47	.95405	Agree
Project monitoring and evaluation contributes significantly to the Customer satisfaction	4.22	1.18276	Agree

**Source: primary data, 2021**

From the table above, we interpret the respondents' level of agreement to the statement provided to them where on Timely completion of project is very high and was given a grade as the first with mean=4.72 to show that they strongly agreed that Project monitoring and evaluation have a great role on performance of agriculture projects. The second is that Project monitoring and evaluation significantly contribute to the Targets achieved=4.47, Quality specifications=4.23, Customer satisfaction=4.22, and completion with budget =4.21 classified respectively. The interpretation goes on showing that Project monitoring and evaluation as Project management practices role plays a key contribution on the performance of agriculture project. This has supported by the study [15] revealed that effective monitoring and evaluation is very important for the

successful implementation and achievement of results for any project. They added that monitoring and evaluation aid in measuring progress, detecting problems, correcting them, improving performance.

**Table 5:** Correlation Matrix showing the relationship between Project management practices role Performance of Agriculture project.

		Role of Project management practices	Performance of Agriculture project
Role of Project management practices	Pearson Correlation Sig. (2-tailed) N	1  73	.995** .000 73
Performance of Agriculture project	Pearson Correlation Sig. (2-tailed) N	.995** .000 73	1  73

Correlation is significant at the 0.01 level (2-tailed)

Pearson’s correlation coefficient, (r=0.995) shows that there was a very high positive and significant relationship (sig=0.000) between Role of Project management practices and Performance of Agriculture project. This was an indication that if management practices’ role is strongly implemented, Performance of Agriculture Projects would perform at highest level. This positive relationship indicates that a directional change in the independent variable (role of project management practices) lead to the same directional change in the dependent variable (Performance of Agriculture project).

**Table 5:** Regression analysis showing the Role of project management practices on performance of agricultural.

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.714	.650	.132	.09	.000
Project planning	.875	.122	.478	.432	.000
Project Financing	.928	.145	.020	.193	.020
Project execution	.733	.116	.469	.554	.000
Project monitoring and evaluation	.854	.234	.464	.343	.000

projects.

a. **Dependent Variable:** Agriculture project performance

b. **Constant:** Role of Project management practices

Using linear regression analysis from SPSS databases, the Role of Project management practices which are Project planning, Project Financing, Project execution, Project monitoring and evaluation as independent

variables, were regressed to find out how they contributed to the Performance of Agriculture project. According to beta and t-values, Project planning had the most influence on Agriculture project performance (beta=.478, t=.432 and sig=0.000). Following in the degree of influence was Project execution (beta=.469, t=.554 and sig=0.000). Therefore, all studied role of project management practices significantly predicts Performance of Agriculture project and should therefore be emphasized. This agrees with the studies presented by Child & McGrath (2001) which points out that project management practice's role is becoming increasingly important as more and more work is organized through projects and programs. The predicted model from above table was agriculture Project Performance= .714+.875 Project planning+ .928 Project Financing +.733Project execution+.854 Project monitoring and evaluation.

#### **4. Conclusion**

The conclusion from the findings and the corresponding discussions, the study concludes that existed the great role played by Project management practices to the Performance of Agriculture project as proved by Timely completion of Project, Completion with budget, Quality specifications, Targets achieved, customer satisfaction. Because projects financed didn't face lack of liquidity, the farmers have planted their crops on time and it was an extraordinary advantage to them because agriculture projects are affected by seasonality, any delay cause poor production which can cause poor performance because of lower quality and quantity harvesting. The agricultural inputs were of good such as quality seeds and other ingredients all those factors have shared to the overall performance in their projects.

#### **5. Recommendations**

Diverse policy recommendations can be extracted from the findings of this study. during project planning the government of Rwanda and other management organs are advised to incorporate farmers as beneficiaries that will undertake the project to avoid rolling down already planned projects that may base on their needs.

The management should also include expected risks in their project plan and give possible mitigation methods so that the contingency funds set aside for risks are estimated and allocated. This will assist to cup uncertainties that may lessen on yields.

On the report of the finding, managers of different organizations which sponsor projects should continually modify management aspects to improve performance of agriculture projects. Certain aspects of management should be addressed as an affair of policy, such as supervising farmers through extension services to improve farming activities of a diversity of crops like horticulturally based like tomatoes, vegetables, and onions.

The ministry of agriculture of Rwanda and NAEB should work on clear means of facilitate farmers in marketing of their products both on local and external market but focus more on abroad market because the target of this project was to increase export of horticulture as it brings a huge revenue.

Large numbers of the farmers have been left to search for ways of marketing their crops on their own making some to sell their yields at very low prices. Both the government and the NGOs should be judged with the

responsibility of providing marketing information through media, posters, and emails and if possible, establish centers like effective cereal boards to help farmers sell off their products at better prices.

The main funder of this project, which are the authority of Rwanda and IFAD should increase the funds that invest in conserving horticulture yields because there are perishable and the means of conserving agriculture products like cold room it requires huge investment that farmers cannot be capable of put money into at their very own.

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