



# **EFFECT OF PROJECT MANAGEMENT LEADERSHIP ON AGRICULTURAL PROJECT IMPLEMENTATION PROCESS, A CASE OF GREEN GICUMBI PROJECT, RWANDA**

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## ABSTRACT

*This study sought to establish the effect of project management leadership on project implementation process in Rwanda, a case of Green Gicumbi Project, Rwanda. The study was built on the following specific objectives; to find out the effect of project management leadership competency on the project implementation process of Green Gicumbi Project; to assess the effect of project management leadership professionalism on the implementation process of Green Gicumbi Project; and to establish the effect of project management leadership accountability on the implementation process of Green Gicumbi Project. The study adopted descriptive and correlational research designs. In addition, for the study to realize the accomplishment of the above objectives, a combination of questionnaires, interviews, documentary reviews and other reports were used. The study used a sample size of 98 respondents and these included the project management, project partners' staff and the project's ordinary staff. The ANOVA test was carried out and discovered P-value of 0.001 which was less than alpha (5%), the significance level. In conclusion, as presented in coefficients table, the study revealed that there is positive and significant on each component of project management leadership on project implementation of Green Gicumbi Project; and hence all null hypotheses were not accepted. For recommendations, the management was suggested to get strong measures on individuals who delay Green Gicumbi Project projects, watch over embezzlement and fraud, corruption and risk. As regards to stakeholder involvement, the participation in the domain of funds should be increased because the results found that the only source of money in this project is the donor.*

**Key words:** Project management leadership, Project implementation, Rwanda

## Introduction

The history of project management leadership can be traced back to the early 20th century. It began with Henry Gantt inventing his handy chart and continued through many of the most significant events in modern history (Spencer, 2016). World wars, space shots, and the Internet all depended in some way on the development of project management. This history maybe broken into four stages of advancement. A quick look reveals that it's a fairly brief history, with the first stage including all of human history prior to 1958 (Rutto, 2017). It's around that year that the term 'project manager' was first used as we now do (Agbemabiese, 2018). Because there has been an increase in ineffective project management leadership, many training courses have been organized and many studies have been conducted to find ways with which to deal with ineffective project leaders (Malik, Saleem & Naeem, 2016).

In the United States (US), the first large project that required project leadership was the transcontinental railroad, which began construction in the early 1870s. Suddenly,

business leaders found themselves faced with the daunting task of organizing the manual labor of thousands of workers and the manufacturing and assembly of unprecedented quantities of raw material. It's not until the 1950s that organizations started to apply systematic project management tools and techniques to complex projects (Herz & Schultz, 2016). The U.S. Navy greatly contributed to the formulation and documentation of principles of modern project management methodologies and techniques. There were also other noteworthy projects, such as the Manhattan project, that significantly contributed to advancement of standard practices in modern project management. In the 1970s technological advancement made the creation of project management software possible, via software companies such as Oracle (Caird, 2018).

In Sub Saharan Africa, an evaluation of a World Bank projects, found out that during a ten-year period, activities carried out in an irrigation project funded in four countries that include Ethiopia, Kenya, Somalia and South Sudan shifted from a top down government approach. This led to heavy reliance on the local farmers in the design, operation and maintenance of local irrigation project systems. It was discovered

that the canals and structures worked better, rice yields were 20% higher and the irrigated area 35% greater than in control groups without participation (Chun, 2017). It was discovered that major public private partnership (PPP) initiatives in Sub Saharan Africa have reportedly failed due to stakeholder opposition. As a result, it reveals that stakeholder's participation during project planning is the key to project success and without their input the outcome may not be favorable (Alexandra, 2020).

As a country experiencing rapid growth, urbanization and changes in economic structure, Rwanda is particularly vulnerable to the effects of climate change. It already suffers from the extremes of flooding and drought, desiccating its agricultural land and infrastructure systems across the country (MoE, 2021). In particular, project management leadership in Rwanda has always been pivotal in project implementation process and success especially in environmental protection related projects. The Government of Rwanda is one of a few nations across the world who have developed a national climate change and environment fund. The national climate change and environment fund is built on the adopted Green Growth and Climate Resilience Strategy that was put

in place in 2012. The purpose of such projects would be to ensure sustainable financing is accessible to support environmental sustainability, resilience to climate change and green growth (Green Climate Fund, 2019).

Therefore, the researcher found out the effect of effect of project management leadership on agricultural project implementation process in Rwanda, a case of Green Gicumbi Project, Rwanda (GGP).

### **Statement of the Problem**

Regardless of the effort by the governments of developing countries, like Rwanda and development partners like United Nations to improve performance of the public funded projects, project management leadership is at times marked by incompetence, bribery, dishonesty and unskilled manpower (Ramamoorti, 2018). Operations failure or delayed implementation of suggested performance principles has caused in unreasonably hiked operation costs, ungraceful business undertakings, and failure to interest and maintain experienced and skilled workforces in the project operations, thus affecting the function's implementation (OAG, 2018). According to MINECOFIN (2021), to have well

performed public projects in Rwanda is crucial in order to save costs, and to timely avail key services to citizens aimed at improving their living conditions as enshrined in the National Strategy for Transformation (NST1).

However, the Office of the Auditor General (2020) report discovered that government incurred financial losses due to low levels of budget execution and stalled projects. It was discovered that between 2016/17 and 2018/19 financial years, 98 projects, worth Rwf95.67 billion, were either abandoned or significantly delayed (OAG, 2020). According to Transparency International - Rwanda (2021), there was low level of beneficiaries' awareness on the project and participation in the implementation of project's activities during the implementation of first phase of Green Gicumbi project. In addition, the report indicated that the aspect of risks management was not fully framed following the nature of each project activity; and with very few communication and feedback mechanism in place to ease interactions with partners, project implementation guidelines were also not in place. Likewise, it was evidenced that beneficiaries are not much aware of project governance structure which is a tool to enhance transparency and

accountability in the project implementation process. It's important to note that previous studies did not focus on the project management leadership and project implementation specifically Green Gicumbi, and this poses a gap regarding information.

Therefore, the above raised the researcher's enthusiasm to establish the effect of project management leadership on agricultural project implementation process in Rwanda, a case of Green Gicumbi Project, Rwanda.

### **Specific Objectives**

The specific objectives of this study were these below:

1. To find out the effect of project management leadership competency on the implementation process of Green Gicumbi Project
2. To assess the effect of project management leadership professionalism on the implementation process of Green Gicumbi Project
3. To establish the effect of project management leadership accountability on the implementation process of Green Gicumbi Project

### **Research Hypotheses**

The following are the research hypotheses that guided this study:

**H<sub>01</sub>:** There is no significant relationship between project management leadership competency and the implementation process of Green Gicumbi Project;

**H<sub>02</sub>:** There is no significant relationship between project management leadership professionalism and the implementation process of Green Gicumbi Project;

**H<sub>03</sub>:** There is no significant relationship between project management leadership accountability and the implementation process of Green Gicumbi Project.

## **LITERATURE REVIEW**

### **Theoretical Framework**

This study stems primarily on three theories; the contingency theory the, two-factor motivation theory, psychological contract theory. These theories enhance understanding of behavioural aspects that have all to do with project management leadership in relation to agricultural projects implementation process in developing countries, Rwanda in particular.

### **The Contingency Theory**

The contingency theory of leadership was suggested by the Austrian theorist named Fred Edward Fiedler in his breakthrough article that was published in 1964 titled "A

Contingency Model of Leadership Effectiveness." Fred Edward's breakthrough theory underscores the prominence of both the spearhead's temperament and the circumstances in which that particular leader operates. The theory highlights that a leader's success is contingent on how well his or her style contests a precise setting or situation. Professionalism in project management leadership is critical. The manner in which organizations conduct themselves in its operational dealings directly distresses public judgement and the people's conviction in any backed developments.

### **The Two-Factor Motivation Theory**

In 1959, Frederick Herzberg, a behavioral scientist recommended a two-factor theory which is at times called the motivator-hygiene theory. According to Herzberg, there are some employment dynamics that result in satisfaction while there are other employment dynamics that thwart frustration. Institutions and organizations hire project management leaders to evaluate the economy, efficiency and effectiveness of the processes that are critical to meeting their strategic objectives. These professionals are required to examine, monitor and analyze activities related to the

business' structure, and like in most professions there is a certain set of skills that can aid them in their work

### **Psychological Contracts Theory**

Psychological contract theory came to be identified in 1960 by Argyris. However, only within the last ten to fifteen years has it become more popular and more research been done on the subject in both academic and research arena. Psychological contract refers to an individual's belief regarding the reciprocal obligations between employees and their employers. The psychological contract presents an unwritten set of assumptions and expectations upon which the relationship of the employer and employee are based. The psychological contract refers to employees' perceptions of what they owe to their employers and what they are owed from the employers. However, based on reciprocal exchange, psychological contract must be distinguished from the expectations because it entails a belief in what the employer is obliged to provide (Johnston, 2017).

### **Empirical Review**

This section presents the empirical studies and their findings. The empirical studies are presented in line with the study's objectives

which are largely associated with independent variable and dependent variables.

### **Project management leadership competency and the implementation process**

In a study carried out by Borchgrevilko & Hambarg, (2020), on the effect of project management leadership competency on the implementation of public funded projects in Northern Canada, 87.6% of the respondents suggested that organizations should categorize their purchases based on two broad dimensions, the complexity of the supply market and the importance or profit impact of the good or service. He argues that supply market complexity should be assessed in terms of criteria such as the number and availability of potential suppliers, the level of competitive pressure, the pace of technological change, entry barriers, substitution possibilities, and logistics or storage costs. The findings revealed that 81.3% of the respondents asserted that the importance or profit impact of a good or service is defined by criteria such as the volume purchased, the cost as a percentage of the organization's total purchasing expenditure, and the impact on the quality or reliability of the organization's

end product. Using these criteria, assessed on a simple 'high' or 'low' basis, organizations can allocate their various purchases into one of the four categories.

### **Project management leadership professionalism and the implementation process**

Lee (2019) in his study on Essentials of Project Management Leadership Professionalism in Japan and China, he revealed that project management leadership can be used as a tool to reduce process time, generate sourcing savings and to drive incremental revenues. He further found out that implementation of Project Planning starts with selection of a tool to complement an organizational strength, followed by change in management and training of the staff and other stakeholders where possible.

### **Project management leadership accountability on the implementation process**

From the point of view of the Muhumuza (2019), Project Management Leadership Accountability in East Africa, Uganda in particular strengthens financial controls, facilitating a full and updated picture of commitments and expenditure on a continuous basis. Once a commitment is

made, the system should be able to trace all the stages of the transaction processing from budget releases, commitment, purchase, payment request, reconciliation of bank statements, and accounting of expenditure.

## RESEARCH METHODOLOGY

### Research Design

This research adopted descriptive and correlational study design where both qualitative and quantitative research approaches were used. Quantitative approach is the investigation in which quantity data is collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time (Mugenda & Mugenda, 2013).

### Study Population

Target population in this study was three hundred sixty thousand, seven hundred six (360,706) respondents. These included the project management, project partners' staff and the project's ordinary staff. The partners of the GGP that were included are beneficiaries, Ministry of Environment, FONERWA, Gicumbi district leadership and the Executive secretaries of the six sectors of Gicumbi District in which the

project is based. The six sectors are: Kaniga, Rubaya, Cyumba, Rushaki, Shangasha, Mukarange.

### Sample Size

the researcher used the Solvin's sample size formula and it is shown below.

$$n = \frac{N}{1 + Ne^2}$$

n = sample size  
N = target population  
e = margin error (10%)

$$n = \frac{360,706}{1 + 360,706 \times (0.01)^2} = \frac{360,706}{3,608.06} = 99.97 \approx 100 \text{ respondents}$$

### 3.7 Data Analysis

#### Description of Regression Analysis

The model to be used in the study was guided by the form below:

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

Where: Y = Project Implementation

X<sub>1</sub> = Competency

X<sub>2</sub> = Professionalism

X<sub>3</sub> = Accountability

α = Constant Term

β = Beta Coefficient – This measures how many standard deviations a dependent variable changed, per standard deviation increase in the independent variable.

$$PIM = \alpha + \beta_1 COM + \beta_2 PRO + \beta_3 ACC + \epsilon$$



## FINDINGS PRESENTATION, ANALYSIS AND INTERPRETATION

**Regression Analysis:** helped the researcher to determine how changes in the independent variables are associated with changes in the dependent variable.

### *Coefficients*

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	1.219	.283	4.303	.000
Competency	.066	.195	.338	.006
Professionalism	.299	.176	1.698	.003
Accountability	.129	.150	.857	.001

From the coefficients presented in table 4.14, the established regression equation was:

$$PIM = \alpha + \beta_1 COM + \beta_2 PRO + \beta_3 ACC + \epsilon$$

$$\text{Project Implementation} = 1.219 + 0.037 \text{ (COM)} + 0.193 \text{ (PRO)} + 0.089 \text{ (ACC)} + 0.283$$

From the regression equation and findings presented in table 4.14, it was revealed that holding competency, professionalism and accountability to a constant zero, project implementation in Green Gicumbi Project would be 1.219. Indeed, this constant called

y-intercept is not realistic but it is a needed parameter in the model. As per the findings, there is positive and significant effect of competency on project implementation ( $\beta = 0.037$ ; t test = 0.338; p-value < 5%). This implies that a unit increase in competency would lead to increase project implementation in Green Gicumbi Project by a factor of 0.037 which translates to rejection on the first null hypothesis. Likewise, there is positive and significant effect of professionalism on project implementation ( $\beta = 0.193$ ; t test = 1.698; p-value < 5%). This implies that a unit increase in professionalism would lead to increase in project implementation in Green Gicumbi Project by a factor of 0.193 which translates to rejection on the second null hypothesis.

In addition, there is positive and significant effect of accountability on project implementation ( $\beta = 0.089$ ; t test = 0.857; p-value < 5%). This implies that a unit increase in accountability would lead to increase in project implementation in Green Gicumbi Project by a factor of 0.089 which translates to rejection on the third null hypothesis. From these positive results which each component of project management leadership affects positively and significantly project implementation in

Green Gicumbi Project by a big range, this evidences that all null hypothesis of the study were not accepted; and besides all the variables were statistically significant in contributing to project performance of Green Gicumbi Project.

The researcher concluded that there was a strong positive and significant effect among the study variables as shown by the regression analysis since they both indicated positive influence of project management leadership on project implementation in Green Gicumbi Project. Therefore, the study's null hypotheses were rejected.

### **Conclusion**

Basing on the findings, the study asserted that project management leadership in terms of competency, professionalism and accountability have strong relationship on the agricultural project implementation process in Rwanda which according to the study respondents, it was mainly due to the effective project management leadership that determined the current performance of the implementation process of Green Gicumbi Project. However, based on the findings, there are some gaps in the operations of the project including failure for the management to transmit information about goals, policies and procedures; the stakeholders don't

participate in management and project activities; and the failure of the project to give an orderly, efficient and accurate evidence and controls

Hence, there was a strong positive and significant effect among the study variables as shown by the regression analysis since they both indicated positive and significant influence of project management leadership on project implementation in Green Gicumbi Project. Therefore, the study's null hypotheses were rejected.

### **Recommendations**

Referring to the study results, the following are the suggestions and recommendation to the project management leadership especially Green Gicumbi Project. Concerning the issue of failure to comply transit information about goals, policies and procedures, the top management should ensure and rely on all media available to them in order to reach out to all stakeholders. This could be done through meetings, workshops, radio shows, emails or SMS. As regards to stakeholder involvement, the participation in the domain of funds should be increased because the results found that the only source of money in this project is the donor.

Regarding the lack of proper internal control processes, the top management should look into it and they ought to make a philosophy by the in control personnel at the project and its operations.

As regards to untimely deliveries, officials who delay project operations and developments should also be touched individually so as other staff could avoid doing similar mistakes in future.

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