



**PROJECT MANAGEMENT PRINCIPLES AND PERFORMANCE OF  
AGRICULTURAL PROJECTS IN KIAMBU COUNTY, KENYA**

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**ABSTRACT**

The Agricultural sector employs a significant portion of the population, especially in rural areas, and contributes substantially to the country's Gross Domestic Product (GDP). However, the performance of agriculture projects has emerged as a pressing concern amid increasing challenges, including climate change, natural resource depletion, population growth, and market volatility. The main objective of the study was to examine the influence of project management principles on performance of agricultural projects in Kiambu county, Kenya. Specifically, the study sought to assess the influence of project value on performance of agricultural projects in Kiambu county, Kenya, and to determine the influence of project leadership on performance of agricultural projects in Kiambu county, Kenya. A descriptive design was used in this research. The study targeted all 124 Community Driven Agriculture Projects officers from the Ministry of Agriculture in the county government of Kiambu. The study used census method since the study population was small. Questionnaires were the selected instrument for data collection for the study. The study carried out a pilot study to pre-test and validate the questionnaire. Statistical Package for Social Sciences (SPSS) was used to analyze the data. The validity results show that project revenue had an Average Variance Explained (AVE) of 0.537, project leadership 0.532 and project performance had AVE of 0.530. Reliability statistics show that project value had a Cronbach's Alpha coefficient of 0.742 and project performance 0.758. The questionnaire was hence considered valid and reliable. Findings show that; there is a strong significant relationship between project value and project performance ( $r=0.628$ ,  $p=0.000$ ), a strong significant relationship between project leadership and project performance ( $r=0.819$ ,  $p=0.000$ ). The recommendations are; the project managers should also ensure that the farmers are provided with adequate resources, equipment, and other inputs that may enable them to produce valuable products that meet the market quality. Project team members should receive communication promptly and regularly and the project mission should be clearly defined and broken into measurable outcomes, the project managers should have flexible project designs. This enabled them to incorporate changes that may be suggested by the project stakeholders.

**Key Words:** Project Management Principles, Project Value, Project Leadership, Performance of Agricultural Projects, Kiambu County

## **Background of the Study**

Agriculture holds a central position in Kenya's economy, serving as a cornerstone for development, poverty reduction, and food security (Mose et al., 2020). The sector employs a significant portion of the population, especially in rural areas, and contributes substantially to the country's Gross Domestic Product (GDP) (World Bank, 2019). However, the performance of agriculture projects has emerged as a pressing concern amid increasing challenges, including climate change, natural resource depletion, population growth, and market volatility (African Development Bank, 2018).

Improved agricultural performance is an essential paradigm shift that focuses on balancing economic prosperity, social well-being, and environmental conservation (Ruto et al., 2021). It entails adopting practices that promote long-term productivity while preserving natural resources, conserving biodiversity, mitigating climate change impacts, and ensuring food security for future generations. As the global community intensifies its efforts to achieve Sustainable Development Goals (SDGs), agricultural performance has gained prominence as a critical pathway for addressing complex agricultural and environmental issues in Kenya (FAO, 2020).

According to PMBOK 7<sup>th</sup> edition, project management principles encompass a range of key elements, including stewardship, collaboration, active stakeholder engagement, value generation, systems thinking, and effective leadership (pg.). Additionally, Iqbal (2023) issue supplementary principles that involve customized approaches, emphasis on quality, adeptly handling project complexities, risk management, fostering adaptability and resilience, as well as skillful change management. Project stewards are expected to conduct themselves properly, adhere to both internal and external policies, and show an exhaustive involvement in the economic, social, and environmental effects of the projects they promote. According to Walker and Lloyd-Walker (2019), they must also be honest, reliable, and compliant. It includes obligations both inside and outside the company. In addition, a comprehensive approach of stewardship takes into account financial, social, technological, and adaptive environmental awareness.

## **Statement of the Problem**

World Bank data indicates that 45.9% of Kenya's total population of 44.3 million citizens still affected by poverty which sharply contrasts its immediate neighbors, Uganda and Tanzania that have 16.4% and 28.2% of the population living in poverty respectively (World Bank, 2019). Moreover, Kenya possesses a low score on the Human Development Index, specifically ranking 147 out of 187 countries in terms of life expectancy, education and standard of living (HDI, 2019). Agricultural projects play a pivotal role in various aspects of society, from food security and economic development to environmental sustainability and rural livelihoods. Their significance extends to both developed and developing countries.

A survey conducted by the International Food Policy Research Institute (IFPRI) in Kenya revealed that only 27% of agriculture projects effectively utilized project management principles, while 45% faced challenges in measuring project outcomes (IFPRI, 2020). Additionally, a study by the Food and Agriculture Organization (FAO) found that agriculture projects with robust M&E systems were 35% more likely to achieve sustainable outcomes compared to projects without such systems (FAO, 2019). This emphasizes the importance of effective project management principles in enhancing the long-term impact of agriculture projects. Furthermore, a report by the Ministry of Agriculture in Kenya highlighted that project with project management principles experienced a 20% reduction in post-harvest losses, leading to improved food security and income generation for farmers (Ministry of Agriculture, Kenya, 2018). This demonstrates the role of project management principles in identifying and addressing challenges to enhance project performance.

Several studies have been undertaken on project management principles on project performance. For instance, Rogito (2020) carried out a research on the influence of project

management principles on YEDF projects. Ong'ong'a. (2018) study on LATF showed that there was no project management department in Local Authority Councils to follow project implementation and suggested further research on how to strengthen project management principles in the local authorities to effectively carry out their projects. Munyao (2018); Abdi & Kimutai (2018); Ndedi (2017); Cavens, Christopher & Harriet (2017); studies done elsewhere based on various study variables such as management commitment, staff training, technical expertise, design/approach, stakeholder participation, and leadership revealed to have a constructive and remarkable influence on performance of a project. While some studies have evaluated the effectiveness of project management principles in other sectors, a comprehensive examination of how project management principles contributes to the performance of agriculture projects in Kenya, especially Kiambu County remains largely unexplored. This research sought to address this gap by examining the influence of project management principles on performance of agricultural projects in Kiambu county, Kenya.

### **Objectives of the Study**

The main objective of the study was to examine the influence of project management principles on performance of agricultural projects in Kiambu county, Kenya.

The study was guided by the following specific objectives;

- i. To assess the influence of project value on performance of agricultural projects in Kiambu county, Kenya
- ii. To determine the influence of project leadership on performance of agricultural projects in Kiambu county, Kenya

## **LITERATURE REVIEW**

### **Theoretical Review**

#### **Resource-Base Theory**

Resource-Based Theory, introduced by Jay B. Barney in 1991, is a management theory that focuses on a firm's internal resources and capabilities as the primary sources of competitive advantage (Barney, 1991). According to RBV, a firm's unique resources, such as technology, knowledge, skills, reputation, and culture, can enable it to create value, achieve superior performance, and outperform competitors in the long run. It explains that not all resources are equally valuable and that sustainable competitive advantage comes from possessing resources that are rare, valuable, inimitable, and non-substitutable (Barney, 1991). These resources, referred to as strategic resources, provide a firm with a sustainable competitive edge and are difficult for competitors to replicate.

The theory has been widely used in strategic planning and has influenced how organizations approach resource allocation, strategic decision-making, and competitive positioning. RBV has been applied in various industries to identify and leverage core competencies and critical resources that can drive sustained organizational success (Grant, 1991).

Critiques of Resource-Based View Theory include debates over the exact criteria for identifying strategic resources and difficulties in empirically measuring the impact of resources on firm performance (Wernerfelt, 1984). Some critics argue that the theory may overlook the influence of external market dynamics and industry factors in shaping a firm's competitive advantage (Priem & Butler, 2001).

In this study, Resource-Based View (RBV) Theory can provide valuable insights into how agricultural projects can leverage their unique resources to achieve sustainability and competitive advantage. By understanding their internal resources, such as technology, knowledge, and skills, agriculture projects can identify their core competencies and strategically align them with external opportunities and challenges. Applying RBV Theory in this study can help assess how agricultural projects in Kiambu County utilize their internal

resources to enhance their value. This theory will therefore be used to assess the influence of project value on performance of agricultural projects in Kiambu county, Kenya.

**Social Learning Theory**

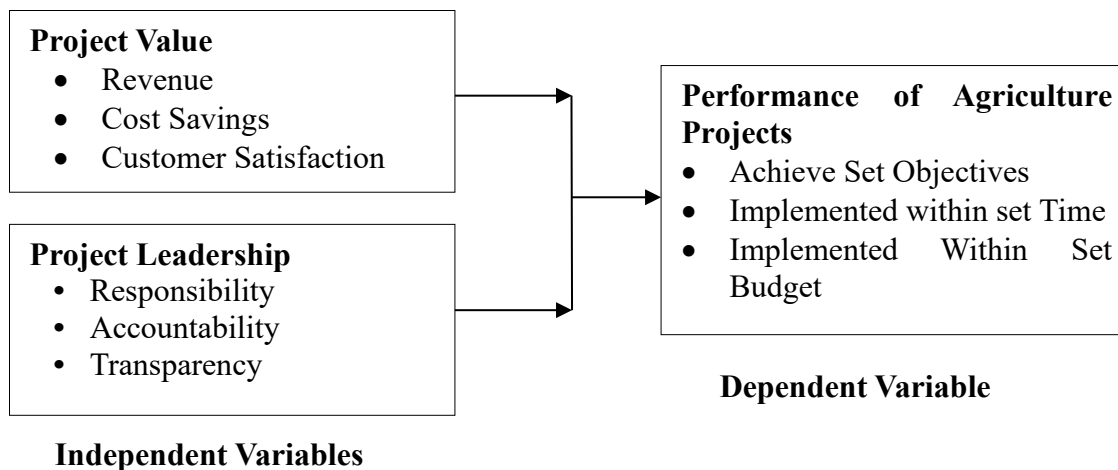
Social Learning Theory (SLT) was propounded by Bandura in 1977. The cognitive development theory gives the basis of the social learning theory which has formed the theoretical basis of recognition of social contagion of behavior from leaders to followers. Through observation and imitation followers will behave similarly to their leader, (Brown, Treviño, & Harrison, 2005) hence followers are more likely to commit to ethics already committed to by leaders. Alongside the social learning perspective is the social exchange perspective of ethical leadership where relationship within these perspectives operate according to the norms or reciprocity, (Hansen et al, 2013; Shore et al,1993; Blau, 1964). Where there is high quality social exchange relationship, there’s observed positive behavior in the organization for instance if leaders treat their followers with respect, there will be a reciprocative behavior from the followers towards others and more so to the organization.

The theory also holds that individuals learn standards of behavior; (a) vicariously (i.e., by watching others); (b) through direct modeling; and (c) by verbal persuasion (Bandura, 1977). Ethical leaders help employees to become more confident about their abilities, strengthen their behavioral and motivational patterns, and clarify to employees how their tasks and efforts will contribute to the achievement of important work unit goals (De Hoogh & Den Hartog, 2008). It will be used to explain character dimension variable.

The social learning theory argues that leaders have authority of energy to remunerate and rebuff. This makes representatives to give careful consideration and copy pioneers' conduct, and they will do what is remunerated and abstain from doing what is rebuffed in the association. In this way, prizes and disciplines ought not be immediate but rather additionally can be adapted vicariously by watching how others in the association are remunerated and restrained (Yukl, 2012). Social learning theory will be used in this study to assess the influence of the influence of project leadership on performance of agricultural projects in Kiambu county, Kenya.

**Conceptual Framework**

A conceptual framework is a diagrammatic representation of variables that depict the relationship between the independent variables and dependent (Orodho, 2009). It takes into consideration the theoretical and conceptual issues surrounding research work and forms a coherent and consistent foundation that underpins the identification and development of existing variables (Mugenda, 2008). It shows the expected relationship between the dependent and independent variables. The diagrammatic representation of the study variables is as indicated in Figure 2.1.



**Figure 2.1: Conceptual Framework**

## **Project Value**

Project value is a central and multifaceted concept in project management principles. It encompasses the core objective of any project, which is to deliver benefits and returns to the organization, its stakeholders, and customers. This concept underscores the ultimate purpose of project management: to create value (Eskerod & Ang, 2017). The creation of value may take various forms, including increased revenue, cost savings, improved customer satisfaction, enhanced brand reputation, or strategic alignment with the organization's overarching goals. Therefore, understanding, measuring, and maximizing project value are crucial aspects of effective project management. One of the foundational principles of project management is the alignment of projects with an organization's strategic objectives. Projects should not exist in isolation but should be intimately connected to the broader strategy of the organization. Project managers play a pivotal role in ensuring that each project has a clear link to the organization's mission, vision, and strategic goals. This alignment ensures that the projects undertaken contribute directly to the long-term success and sustainability of the organization (Winter & Szczepanek, 2018).

To effectively manage project value, it is essential to identify and analyze value potential early in the project lifecycle. This involves conducting a comprehensive assessment of the expected benefits, costs, risks, and opportunities associated with the project. Value identification and analysis enable project stakeholders to make informed decisions about which projects to pursue and how to allocate resources optimally. By thoroughly understanding the value proposition, organizations can prioritize projects that promise the greatest return on investment (Wanyonyi & James, 2019). Project managers and stakeholders should adopt a value-based decision-making approach throughout the project's lifecycle. This means evaluating project options, trade-offs, and changes based on their potential impact on project value. In practice, this often involves making difficult decisions about scope, time, and cost while striving to maximize value. By consistently assessing decisions through the lens of value, project teams can stay focused on delivering the most significant benefit to the organization (Ekung, Agu, & Iheama, 2017)

## **Project Leadership**

Project leadership is a critical aspect of project management that involves guiding a team to successfully complete a project. Effective project leadership is essential for achieving project objectives, managing resources, and ensuring the project is completed on time and within budget. Responsibility in project leadership refers to the duty or obligation of individuals or teams to perform specific tasks, roles, or functions within the project. It involves assigning roles and responsibilities to team members based on their skills, expertise, and competencies (Nanthagopan, Williams, & Thompson, 2019)

Accountability in project leadership is closely linked to responsibility and refers to the obligation of individuals or teams to answer for the successful completion of their assigned tasks or roles. Transparency in project leadership refers to the openness and visibility of project processes, decisions, and information. It involves sharing relevant project information with stakeholders and team members to foster trust and informed decision-making. Transparency is critical because it fosters trust among team members and stakeholders, promotes collaboration, and allows for more informed decision-making. It also helps identify and address issues proactively, which can prevent them from escalating into major problems (Malla & Delhi, 2022). Project leadership is about guiding a project team toward success, and responsibility, accountability, and transparency are essential components of effective leadership. Responsible team members understand their roles and tasks, accountable individuals take ownership of their responsibilities, and transparent leadership fosters trust and informed decision-making. Together, these elements contribute to the successful delivery of projects and the achievement of project goals (Nezami *et al.*, 2023)

## **Empirical Literature Review**

### **Project Value and Project Performance**

Projects involve multiple different stakeholders (where a stakeholder is “an individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project”) (Project Management Institute (PMI), 2019), internal and external, each of whom may have specific ideas of what constitutes value (Eskerod & Ang, 2017). Value management in project business deals with the means to identify stakeholders’ explicit expectations about what is of worth/worthy and convert these expectations into plans and measurable benefits (through project activities). In contrast to the traditional product- and output-centric idea of project success, adopting the value creation perspective draws attention to the broader project life cycle, including the customers’ customers and their anticipation of implemented outcomes (Winter & Szczepanek, 2018). Value management, in this vein, implies not only planning and creating value throughout the project, but also delivering and capturing it long after the project is complete

Ekung, Agu, and Iheama (2017) assessed project governance in two mega projects in Nigeria and identified how associated behaviors affected the outcomes. Through preliminary research, a sample of 116 respondents was obtained. Data on respondents’ opinions on the project governance structure were gathered using a structured questionnaire. The findings showed that project governance structures needed to be enhanced and that accepting ownership would boost megaproject performance. In their research, Njeri and Were (2017) sought to assess the impact of project team dedication and top management support on project performance within NGOs in Kenya. The research utilized a descriptive research approach and involved 304 participants, including executives, branch managers, field agents, and accountants. The researchers employed a stratified random sampling process, obtaining 105 participants from each strata of the target population. The study gathered primary data using semi-structured questionnaires. The research findings indicated that top management support plays a significant role in influencing project success in Kenyan non-governmental organizations. Based on these results, the researchers recommended that executives should recognize the merits of assigning responsibility to the project manager and team members while enhancing project outcomes.

Wanyonyi and James (2019) examined into how project management techniques affected the success of community development programs In Bungoma County, Kenya. The researchers used a descriptive research design in their study. 160 current programs for community development since 2015 were the intended target group. The study selected 48 projects from a variety of County sectors using stratified sampling method. The researchers gathered primary data via questionnaires, while they sourced secondary data from earlier research and publications. The results showed that project planning, monitoring, and evaluation, interactions, and stakeholder engagement significantly improved the performance of projects, as evidenced by better results, more accountability, and enhanced control.

### **Project Leadership and Project Performance**

Chaudhry, Kalyar and Rehman (2019) researched on the Impact of Leadership on Project Performance. The links of these factors with strategic goals and objectives of the project were explored in order to improve project performance and develop organizational culture that foster innovativeness, flexibility, formulating and executing HR systems & policies and activities that produce the employees competencies and behavior the project needs to achieve its strategic aims. The data was collected from includes 70 employees from four main consultancies companies working together on a project, located in Lahore, Pakistan. Responses were gone through EFA and Cronbach’s alpha test to assure consistency and reliability. Finally, path analysis in SEM using Amos was run to explore the nature and strength of the links. Results suggest that leadership has positive links with project performance.

Long and Ismail (2019) study examined the relationship of demographic factors of HR practitioners with HR competencies in the manufacturing companies of Malaysia. The findings

show that the top rank HR competencies are personal credibility and HR delivery. In this research the findings show that HR practitioners in manufacturing companies of the southern-region of Malaysia are lacking in business related human resource competencies. This is one of the main barriers to be surmounted if local HR practitioners are to become strategic partners in their organizations.

Project Management Institute, Pennsylvania (2018) explained (PMP Certification) to Managing Project through Project Guidance, case Study & test papers. PMP helps to manage the performance of a project and also helps to increase work efficiency, when human resources are viewed as an asset, companies enhance individual value through training and human development and ensure continued contribution to the organization". The importance of human resources for the corporate performance has in any case proved both in the literature and the empirical research conducted in all industrial sectors

Fey and Bjorkman (2019) examine the relationship between human resource management (HRM) and the performance of foreign owned subsidiaries in Russia. The sample size 101 foreign owned subsidiaries, the study's results HRM practices can substantially help a firm perform better when spending high investment in this field. In this research furthermore, different HRM practices for non-managerial and managerial level employees are found to be significantly related with firm performance. However, only limited support is obtained for the hypothesized relationship between subsidiary performance and efforts at aligning HRM practices with firm strategy. The results of this study provide relatively strong support for the existence of a positive relationship between HRM practices and the performance of Russian subsidiaries of Western corporations.

### **RESEARCH METHODOLOGY**

A descriptive design was used in this research. The study targeted agriculture project funded by National Agricultural and Rural Inclusive Growth Project (NARIGP) in Kiambu county. According to NARIGP (2023) there are 14 Community Driven Agriculture Projects in Kiambu County as shown in Appendix II which were the study unit of analysis. The study targeted all 124 Community Driven Agriculture Projects officers from the Ministry of Agriculture in the county government of Kiambu (County Government of Kiambu, 2023). The officers were selected as participants in this study due to their crucial role in overseeing and implementing agricultural projects in the region and their role in project management principles. The study used census method since the study population is small. According to Ngechu (2018), an appropriate sampling technique for a small sample size is census because it allows representation of the population. Questionnaires were selected instrument or tool for data collection for the study.

The study carried out a pilot study to pre-test and validate the questionnaire. A pilot study was conducted to test the instrument's reliability, validity, and completeness of responses, and analyse the various measures within the instrument. In the pilot study 12 participants were invited to participate in filling the questionnaires. This was 10% of the study sample size. The selected respondents were excluded from the final study. Qualitative and quantitative data was collected. Descriptive statistics were used to analyze qualitative data and presentation done in tables and figures. SPSS version 25 was used for data analysis. Regression method of analysis was used as the main statistical method.

### **RESEARCH FINDINGS AND DISCUSSIONS**

The study sampled 124 agricultural project officers and 12 were used for piloting. Therefore 112 questions were administered and 95 returned answered questionnaires hence 84.8% response rate. The high response rate was a result of close follow up of the data collection procedure and constant contact with the sampled respondents. The response rate was considered adequate as recommended by Mugenda and Mugenda (2003) that a response rate of more than 70% and over is excellent.

## Project Value

The first objective sought to assess the influence of project value on performance of agricultural projects in Kiambu county, Kenya. Respondents were asked to indicate the extent to which they agree with statements on project value. Results are presented in Table 4.1.

**Table 4.1: Project Value**

*Key: 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly agree*

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Project value is a central and multifaceted concept in project management principles	18	18.9	9	9.5	2	2.1	49	51.6	17	17.9	4.10
One of the foundational principles of project management is the alignment of projects with an organization's strategic objectives	12	12.6	5	5.3	5	5.3	48	50.5	25	26.3	3.73
Agricultural projects should not exist in isolation but should be intimately connected to the broader strategy of the organization	13	13.7	6	6.3	18	18.9	34	35.8	24	25.3	3.53
Project managers play a pivotal role in ensuring that each project has a clear link to the organization's mission, vision, and strategic goals	13	13.7	7	7.4	0	0	35	36.8	40	42.1	4.18
To effectively manage agricultural project value, it is essential to identify and analyze value potential early in the project lifecycle	1	1.1	17	17.9	7	7.4	14	14.7	56	58.9	3.86

**N=95**

Findings show the respondents agreed that; project value is a central and multifaceted concept in project management principles (m=4.10), one of the foundational principles of project management is the alignment of projects with an organization's strategic objectives(m=3.73), agricultural projects should not exist in isolation but should be intimately connected to the broader strategy of the organization(m=3.53), project managers play a pivotal role in ensuring that each project has a clear link to the organization's mission, vision, and strategic goals (m=4.18), and to effectively manage agricultural project value, it is essential to identify and analyze value potential early in the project lifecycle (m=3.86).

Findings imply that project value influences project performance. The projects are aligned with the strategic objective of the ministry of agriculture which ensures that the implementers of the projects adhere to the key objectives of the projects. This is achieved through ensuring that the projects are aligned to mission, vision, and strategic goals of the agriculture in the county. The projects do not exist in isolation but they are connected to the ministries' strategies. The value of projects is also analysed during the early stages of project lifecycle. Findings support Wanyonyi and James (2019) that value identification and analysis enable



project stakeholders to make informed decisions about which projects to pursue and how to allocate resources optimally.

### Project Leadership

The second objective aimed at determining the influence of project leadership on performance of agricultural projects in Kiambu county, Kenya. Respondents were asked to indicate the extent to which they agree with statements on project leadership. Results are presented in Table 4.2.

**Table 4.2: Project Leadership**

*Key: 1-Strongly disagree, 2-Disagree, 3- Neutral, 4-Agree, 5-Strongly agree*

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Effective project leadership is essential for achieving project objectives	5	5.3	12	12.6	20	21.1	35	36.8	23	24.2	3.62
Accountability in project leadership is closely linked to responsibility	8	8.4	6	6.3	10	10.5	46	48.4	25	26.3	3.78
Transparency is critical because it fosters trust among team members and stakeholders	7	7.4	6	6.3	6	6.3	31	32.6	45	47.4	4.07
Responsible team members understand their roles and tasks, accountable individuals take ownership of their responsibilities	17	17.9	0	0	16	16.8	26	27.4	36	37.9	3.67
Project leadership contribute to the successful delivery of projects and the achievement of project goals	8	8.4	6	6.3	7	7.4	44	46.3	30	31.6	3.86

**N=95**

Findings show that the respondents agreed that; effective project leadership is essential for achieving project objectives (m=3.62), accountability in project leadership is closely linked to responsibility (m=3.78), transparency is critical because it fosters trust among team members and stakeholders(m=4.07), responsible team members understand their roles and tasks, accountable individuals take ownership of their responsibilities (m=3.67), and project leadership contribute to the successful delivery of projects and the achievement of project goals (m=3.86). Findings imply that effective project leadership is key to project performance. Leaders' accountability is a sign of responsibility and shows that the leader practices ethical leadership and allocates project resources fairly. Leader's transparency fosters trust among team members which promotes team work and project delivery on time. The leaders also ensures that each team member understand roles and tasks which helps to avoid role duplication. Findings support Omony (2018) that one of the most important determinants for project success is top management support. Without top management backing, project managers with exceptional abilities may fail at any point of the project.

### Project Performance

The agriculture officers were requested to tick on level at which they agree/disagreed with listed statements on project performance. Results are presented in Table 4.3.

**Table 4.3: Project Performance**

Key: 1-Strongly disagree, 2-Disagree, 3- Neutral, 4-Agree, 5-Strongly agree

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Projects are implemented within the set budget	41	43.2	40	42.1	5	5.3	4	4.2	5	5.3	2.13
Agricultural projects are implemented within the set time frame	40	42.1	43	45.3	4	4.2	4	4.2	4	4.2	2.17
Projects achieve the set objectives	5	5.3	4	4.2	5	5.3	54	56.8	27	28.4	3.89
There are few customer complaints concerning the quality of completed projects	9	9.5	6	6.3	17	17.9	34	35.8	29	30.5	3.72
Am satisfied with the performance level of agricultural projects	5	5.3	5	5.3	0	0	35	36.8	50	52.6	4.26

**N=95**

Findings show that the respondents strongly agreed that they are satisfied with the performance level of agricultural projects ( $m=4.26$ ). Respondents also agreed that projects achieve the set objectives ( $m=3.89$ ), and there are few customer complaints concerning the quality of completed projects ( $m=3.72$ ). Respondents however disagreed that agricultural projects are implemented within the set time frame ( $m=2.17$ ), and projects are implemented within the set budget ( $m=2.13$ ). Findings imply that although the agricultural officers are satisfied with project performance, there is a challenge of funding which delays project delivery.

### Coefficient of Correlation

Karl Pearson's coefficient of correlation ( $r$ ), which measures the relationship between independent and dependent research variables, was utilized to measure the strength and relationship between study variables. The results are shown in Table 4.4 below.

**Table 4.4: Correlation Analysis**

Variables		Quality education level	Project value	Project leadership
Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Project value	Pearson Correlation	.628**	1	
	Sig. (2-tailed)	.000		
Project leadership	Pearson Correlation	.819**	.455**	1
	Sig. (2-tailed)	.000	.000	

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

Results in table 4.4 show that; there is a strong significant relationship between project value and project performance ( $r=0.628$ ,  $p=0.000$ ), a strong significant relationship between project leadership and project performance ( $r=0.819$ ,  $p=0.000$ ). The findings are in support of; Wanyonyi and James (2019) that project planning, monitoring, and evaluation, interactions, and stakeholder engagement significantly improved the performance of projects, Chaudhry, Kalyar and Rehman (2019) that leadership has positive links with project performance, and Pimchangthong and Boonjing (2017) project interconnectedness had a significant effect on project performance.

## Regression Analysis

**Table 4.5: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant/Y Intercept	5.613	.41		12.652	.000
Project value	.612	.080	.515	7.611	.000
Project leadership	.822	.066	.730	12.817	.000

According to findings in Table 4.5, the equation

$$\text{Project Performance} = 5.613 + 0.612 (\text{project value}) + 0.822 (\text{project leadership})$$

Findings show that holding all other factors at constant zero performance, performance of agricultural projects in Kiambu county would be 5.613. Findings also shows that a unit increase in project value results in a 0.612 change in project performance, a unit increase in project leadership results in a 0.822 change in project performance. Findings hence help to answer the research questions on the extent to which caused project value, project leadership, affect performance of agricultural projects in Kiambu county. Project leadership affected project performance (12.817) to a very great extent, project value to a great extent (7.611). All the variables had causes a significant change on performance of agricultural projects in Kiambu county a ( $p < 0.05$ ).

## Conclusion

Project value is a key determinant of project performance. The projects are aligned to the agriculture ministry's mission, vision, and strategic goals. This ensures that the implementers do not sway away from the key objectives of the projects. The value of the projects is analysed early enough. This may help in decision making on which projects to add value and how which enhances project performance and sustainability. Adding value to agricultural projects makes them more marketable, improves shelf life since most of them are perishable, and also the return on investments which may motivate more farmers to implement the projects.

Project leadership determines project success. The project managers ensures that every project team member understand their roles and responsibilities in the projects which are also clearly laid out. The project leader also shares information with the project team which is a show of transparency and helps to build trust with the team members. The leader is also accountable for the project resources and allocates them fairly to ensure that projects run smoothly.

## Recommendations

The project managers should make efforts to improve on the project value. This may be achieved through benchmarking to farms that have been recording excellent performance in agricultural projects. This will improve on the project implementation skills and also marketing of the agricultural projects. The project managers should also ensure that the farmers are provided with adequate resources, equipment, and other inputs that may enable them to produce valuable products that meet the market quality. Projects managers should also prioritize projects that promise greater return on investments when allocating project resources.

Project managers should coach and mentor, empower and inspire the project team members. The managers should also clearly define the roles and processes within the project. Project team members should receive communication promptly and regularly and the project mission should be clearly defined and broken into measurable outcomes. The leaders should also adhere to ethics of transparency and accountability to ensure that project funds are not embezzlement and to promote good relationship with stakeholders.

### Areas for Further Study

A similar study should be conducted in other counties since the study only focused on agriculture projects in Kiambu county.

A study should be conducted incorporating other variables that probably predict 21% of project performance

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