

**PROJECT PLANNING AND PERFORMANCE OF THE
NATIONAL AGRICULTURAL AND RURAL INCLUSIVE
GROWTH PROGRAM IN KENYA**

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Abstract

The study assessed the influence of project planning on the performance of the National Agricultural and Rural Inclusive Growth Program in Kenya. The study adopted an explanatory research design targeting a population of 229 respondents comprising project managers, project sponsors, and community members. The study used Stratified sampling; the study utilized structured and semi-structured questionnaires to collect data. The questionnaires were distributed via google forms to collect data for the research and to enhance the questionnaire's validity and reliability; a pilot study was carried out in Kiminini sub-county. Quantitative data were coded and entered into the Statistical Package for Social Scientists (SPSS, Version 27.0) and analyzed using descriptive statistics. Regression analysis was done to test the level of significance between one variable, confidence level and predictions. The findings showed that project planning significantly affect the performance of NARIGP. Therefore, the study concludes that project planning is key management practices that enhance the performance of NARIGP. The study recommends enhancing collaboration with stakeholders to identify and leverage additional resources is essential.

Keywords: *Project Planning, Project Performance, NARIG*

1.0 Introduction

The National Agricultural and Rural Inclusive Growth Project (NARIGP) is a flagship initiative by the Government of Kenya (GoK), implemented through the Ministry of Agriculture, Livestock, Fisheries, and Irrigation (MoALF&I) with funding support from the World Bank. Approved on August 23, 2016, and operational since July 28, 2017, NARIGP was designed to enhance agricultural productivity and profitability in 21 selected counties. The project focuses on four key intervention areas: community-driven development, strengthening producer organizations and value chain development, supporting county community-led development, and project coordination and management through ICT. Effective planning and execution of these components are crucial for achieving the project's intended objectives and ensuring sustainable agricultural growth.

Project planning is a critical phase in project management, ensuring that all activities align with the defined objectives. Proper planning enables the efficient allocation of resources, risk mitigation, and adherence to timeframes, thereby improving overall project performance. According to PMBOK (2018), project planning involves defining project scope, setting deliverables, scheduling tasks, allocating budgets, and assessing risks. For NARIGP, effective project planning ensures that agricultural value chain support, infrastructure development, and institutional strengthening are systematically executed. Without structured planning, the project risks inefficiencies that could undermine its sustainability and impact on rural communities.

Despite the structured approach to project planning, challenges in execution often arise, impacting project performance. Studies indicate that projects frequently encounter issues such as inadequate stakeholder engagement, resource mismanagement, and delays in implementation (Al-Hajj & Zraunig, 2018). The success of NARIGP depends on the alignment of project planning strategies with implementation realities, ensuring that beneficiaries actively participate in decision-making and resource mobilization. Research suggests that strong planning frameworks contribute to better resource utilization, improved efficiency, and reduced project failures (Githenya & Ngugi, 2014). However, gaps in planning processes may lead to inefficiencies, affecting the project's ability to meet its objectives.

The performance of NARIGP is measured through its ability to enhance agricultural productivity, increase market access, and strengthen rural economic activities. According to Nyoro (2019), effective agricultural development projects require sustainable funding, strategic planning, and continuous monitoring to achieve long-term impact. NARIGP's success is tied to its capacity to provide smallholder farmers with financial services, market linkages, and infrastructure improvements. Nevertheless, performance constraints such as insufficient monitoring, weak institutional capacities, and policy inconsistencies have been identified as potential bottlenecks to achieving the project's objectives.

One of the major concerns in project performance is the level of community involvement in project planning and execution. Studies indicate that projects with higher stakeholder engagement tend to achieve better results compared to those with limited participation (Minyiri & Muchelule, 2018). In the case of NARIGP, community involvement in identifying

agricultural priorities, decision-making, and feedback mechanisms is crucial for the sustainability of project outcomes. Lack of proper engagement and information dissemination may lead to project failures, reduced ownership, and ineffective resource allocation.

Given the importance of effective project planning in ensuring the success of development initiatives, this study seeks to examine the relationship between project planning and the performance of NARIGP in Kenya. In assessing planning processes, stakeholder engagement, resource allocation, and implementation strategies, this research aims to provide insights into best practices for improving agricultural project performance. The findings will contribute to enhancing project management frameworks and policy recommendations that ensure the sustainability and effectiveness of agricultural development programs.

2.0 Theoretical Review

The Theory of Constraints (TOC), introduced by Goldratt (1990), is a process improvement technique that identifies and eliminates obstacles hindering an organization's ability to achieve its objectives. TOC focuses on recognizing bottlenecks within systems and processes, proposing solutions, and ensuring necessary adjustments are made. It has been widely applied in production scheduling, production management, and project management (Blackstone, 2010). Unlike traditional project management approaches that emphasize task completion within set timelines, TOC acknowledges that constraints within a system determine overall performance. Effective planning involves defining scope, allocating resources, scheduling tasks, and estimating costs to create comprehensive project plans for implementation. Johnston and Brennan (1996) further distinguished organizational structures into leadership and signaling pathways, emphasizing the role of operational management in centralizing planning and execution. They argue that plan development and implementation should be seen as a continuous, interdependent process rather than merely issuing instructions.

TOC is particularly useful in project management where resources are shared across multiple projects, as it highlights that system capacity is limited by its weakest link (Izmailov et al., 2016). Overloading constraints leads to inefficiencies rather than improved project completion rates. However, critiques of TOC challenge its broad definition of planning, arguing that it overlaps with various social science disciplines and lacks specificity in defining the roles of planners (Campbell et al., 2012). Despite these criticisms, TOC remains a valuable framework for understanding planning and performance relationships, such as in the National Agricultural and Rural Inclusive Growth Project (NARIGP) in Kenya. Effective planning, including designing activities, scheduling, and ensuring access to budgets, is crucial for successful project execution (Oluoch, 2020; Rachid, Toufik, & Mohammed, 2018). This study, therefore, examines how project planning influences performance within NARIGP.

2.1 Empirical Review (hypothesis development)

Hashakimama (2022) conducted a study to examine how project planning impacts the performance of the Food Sustainability Initiative Project (FSIP) in Rwanda. Using a descriptive research approach that combined both qualitative and quantitative methodologies, the study targeted six FSIP technical staff members and 80 recipients, with an actual sample size of 86

respondents selected through stratified random and non-probability sampling techniques. Data was collected using structured questionnaires and interviews, then analyzed using IBM SPSS version 20 through descriptive and inferential statistical methods. The findings revealed that project planning plays a crucial role in enhancing the effectiveness of Rwanda's food sustainability initiative. Similarly, Pokuaaaddo-Parker et al. (2021) explored the relationship between project planning and outcomes in the construction industry, focusing on Glenshire Hills Estate Management and Incept Architectural Consult. The study utilized stratified sampling to select 134 participants, and data was gathered using structured questionnaires. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were employed alongside inferential techniques such as Pearson correlation and multiple regression using SPSS version 21. Results indicated that the firms primarily undertook residential construction projects, with a few commercial, health, educational, and religious structures. The study confirmed a strong positive relationship between project planning and project success, reinforcing the importance of structured planning processes in the construction sector.

Muute and James (2019) further examined how project planning methods affect the performance of building projects in Nairobi City County, Kenya. Their study targeted 125 construction projects, selecting project managers as key informants to provide data on project performance. Due to the manageable population size, a census approach was used. Data collection involved semi-structured questionnaires, which were analyzed using the Statistical Package for the Social Sciences (SPSS). Pearson correlation analysis revealed a strong connection between quality project planning and successful project outcomes. The study recommended that construction firms implement continuous training programs to enhance workforce skills. In contrast, Mwanza et al. (2020) employed a mixed research approach—including surveys, a census, and correlation analysis—to assess the impact of project planning on construction project performance in Kenya. The study sampled 313 respondents from a target population of 1,761, including Early Childhood Development Education (ECDE) managers, county polytechnic managers, stall managers, and county modern market managers. Findings showed that project planning had a significant negative effect on construction project performance, suggesting inefficiencies in planning processes. Githenya and Ngugi (2014) also investigated agricultural project success factors in Kenya, emphasizing that project planning significantly influences agricultural development performance. Likewise, Chesiyana and Wanyoike (2016) studied CDF-funded projects in Baringo Central Constituency and found that project planning had a major impact on successful implementation. These studies collectively suggest that improving project planning practices can enhance project performance across different sectors. thus, the study hypothesized that:

H₁: Project planning significantly influence the performance of National agricultural and rural inclusive growth program in Kenya.

3.0 Research Methodology

The study's conceptual foundation is based on the Positivist philosophy, which is seen to help understand the problems that impact project success in Kenya. This study used an explanatory analysis design to demonstrate the causal effect link rather than just describing the events under investigation.

3.1 Target Population and sampling

The study focused on a target population of 229 respondents, comprising various accounting officers involved in the National Agricultural and Rural Inclusive Growth Project (NARIGP) in Kenya. This group included County Project Coordinators, agricultural component leaders, community-driven leaders, line project managers, finance officers, project donors, the National Project Coordinator, and Directors of Supply Chain Management. These individuals are directly benefiting from 20 ongoing micro-projects across 21 counties in sectors such as agriculture, livestock, fisheries, irrigation, cooperative development, crop development, water and environment, land and physical planning, and public works (Kothari, 2011). From this target population, a sample size of 146 was determined, using a simple random sampling method to select respondents.

3.2 Data Collection instruments and Procedure

The study used structured questionnaires to collect both quantitative and qualitative data. The questionnaires were administered to the sampled respondents concerning their responsibilities in the agriculture sector. A Likert scale in the questionnaire was employed where most questions were structured on an agreement continuum using a 5-point Likert-type scale. The mixed questionnaires are presented on a Likert scale, with a score of 1-5, tabulated as follows: 1= Strongly Disagree; 2= Disagree; 3= Somewhat Agree; 4= Agree; 5=Strongly Agree. A pilot study was conducted to check the accuracy and appropriateness of the research design and instruments. The aim was to make sure that the questionnaire is consistent, clear, and can be understood. The questionnaire was piloted using 15 respondents drawn from the target population. Mugenda (2003) asserts that 10% of the sample population is adequate for piloting. The validity and reliability of the research tool were also determined. Face validity was applied in the early phases of designing the questionnaire. Face validity was attained by supervisors critiquing the questionnaire. Experts examining the items give their opinions, and necessary adjustments were made to fit their purpose. According to Picco et al., (2020), face validity reflects how appropriate the content of a test is on the surface or face of it if the content of the test appears to be suitable to its stated aims. The study was evaluated for content validity using the Content Validity Index (CVI). According to Polit and Beck (2011), a content validity index with at least six experts should give a maximum CVI of 0.8. Further, construct validity was used to validate the instruments. Construct validity is when a tool or test can measure what it is intended to measure. Cronbach's alpha coefficient was calculated to determine the correlation between different items under study.

3.3 Data Analysis and Model specification

The primary raw data was obtained from the questionnaires and checked for omissions, legibility, and consistency before being coded for analysis. The Statistical Package for the Social Sciences (SPSS) version 27 was used to analyze quantitative and inferential statistics. The inferential analysis was used in examining the association between project planning and the performance of NARIGIP in Kenya. The regression model adopted was;

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon + Z$$

Where: Y = performance of NARIGP, X_1 = Project planning, β_0 is a constant (in which the value of the dependent variable is; Y when all the independent variables are 0), β_1 is the regression coefficients or change induced by independent. ε : The error term.

4.0 Results and Discussions

The main aim of the study was the determination of the influence of project management practices on the performance of the National Agricultural and Rural Inclusive Growth Program in Kenya. 125 of the 146 surveys that were distributed were completed and returned, accounting for 85.61% of the responses.

4.1 Descriptive Statistics

The descriptive statistics for the performance of the National Agricultural and Rural Inclusive Growth Project (NARIGP) indicate moderate levels of achievement across various performance indicators. The overall mean score for NARIGP performance is 3.07 with a standard deviation of 0.75, suggesting a generally average perception of project success with relatively low variability in responses. Among the specific indicators, the highest-rated aspect is completion within the allocated timeframe (Mean = 3.74, SD = 1.14), indicating a relatively positive assessment of timeliness. Similarly, the project’s ability to generate positive impacts or benefits for the organization or community (Mean = 3.53, SD = 1.40) and its effectiveness in addressing identified risks and issues (Mean = 3.46, SD = 1.39) were also rated favorably. Conversely, the lowest-rated aspect is meeting or exceeding stakeholders' expectations (Mean = 2.82, SD = 1.37), suggesting potential gaps in stakeholder satisfaction. Additionally, completion within budget (Mean = 3.22, SD = 1.58) and achieving intended goals and objectives (Mean = 3.18, SD = 1.46) received moderate ratings, with relatively high standard deviations, indicating diverse responses from participants. The variability in responses, especially in financial and stakeholder-related aspects, suggests potential inconsistencies in project execution or differing perspectives among respondents. Overall, while NARIGP appears to have performed fairly well in terms of execution and impact, areas related to stakeholder satisfaction and financial efficiency may require further attention and improvement.

Table 1: Descriptive Statistics for Performance of NARIGP

	Mean	Std. Dev
The project has achieved its intended goals and objectives.	3.18	1.46
The project was completed within the allocated time frame.	3.74	1.14
The project was completed within the allocated budget.	3.22	1.58
The project deliverables meet the desired quality standards.	3.43	1.07
The project outcomes have met or exceeded stakeholders' expectations.	2.82	1.37
The project has effectively addressed identified risks and issues.	3.46	1.39
The project has generated positive impacts or benefits for the organization or community.	3.53	1.40
NARIGP performance	3.07	0.75

The descriptive statistics for project planning indicate varying levels of effectiveness in different aspects of the planning process. The overall mean score for project planning is 3.21 with a standard deviation of 0.86, suggesting a moderately positive assessment with some variability in responses. The highest-rated aspect is the flexibility and adaptability of the project plan (Mean = 3.26, SD = 0.87), indicating that respondents perceive the plan as accommodating changes when necessary. Additionally, the consideration of potential risks and inclusion of mitigation strategies (Mean = 3.21, SD = 0.98) and review and approval of the plan by key stakeholders (Mean = 3.16, SD = 0.97) were rated favorably, suggesting that risk management and stakeholder engagement are relatively well-handled in the planning process. However, the lowest-rated aspects relate to the clarity and communication of project objectives and scope (Mean = 2.10, SD = 0.73) and the definition of tasks, deliverables, and timelines (Mean = 2.34, SD = 0.74). Similarly, the extent to which research and analysis inform the planning process (Mean = 2.32, SD = 0.59) received a relatively low rating, indicating potential weaknesses in the foundation of project planning. These findings suggest that while the project plan is adaptable and considers risks, there may be gaps in initial planning stages, particularly in defining objectives, structuring tasks, and utilizing research insights. Strengthening these areas could improve the overall effectiveness of project planning and alignment with strategic goals.

Table 2: Descriptive Statistics for Project Planning

	Mean	Std. Dev
The project objectives and scope are clearly defined and communicated.	2.10	0.73
The project plan includes well-defined tasks, deliverables, and timelines.	2.34	0.74
The project team has conducted thorough research and analysis to inform the planning process.	2.32	0.59
The project plan considers potential risks and includes appropriate mitigation strategies.	3.21	0.98
The project plan has been reviewed and approved by key stakeholders.	3.16	0.97
The project plan allows for flexibility and adaptation as needed.	3.26	0.87
The project plan aligns with the organization's overall strategic goals and objectives.	2.88	0.84
Project Planning	3.21	0.86

4.2 Correlation Analysis

The study used correlation analysis to establish that relationships between two variables, independent (predictor) and dependent (outcome), in fact do exist. The results presented in Table 3 revealed Project Planning also showed a strong positive correlation with NARIGP performance ($r = 0.681$, $p < 0.01$). This finding suggested that well-defined project planning is linked to better performance, underscoring the importance of effective planning processes in achieving project goals. The results from the Pearson correlation analysis signify that strong relationships exist between NARIGP performance and the various key factors,

including Project Planning. These findings support further analysis of regression analysis.

Table 3: Pearson Correlation Analysis

	NARIGP performance	Project Planning
NARIGP performance	1	
Project Planning	.681**	1

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

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

4.3 Regression Analyses

The regression analysis results in Table 4 indicate a strong relationship between project planning and the performance of the National Agricultural and Rural Inclusive Growth Project (NARIGP). The R-squared (R^2) value of 0.568 suggests that 56.8% of the variance in NARIGP performance can be explained by project planning, demonstrating a substantial impact of planning on project outcomes. The model fit was further confirmed by the ANOVA results, where $F = 126.472$ and $p = 0.000$ indicate that the regression model is statistically significant. This confirms that project planning meaningfully contributes to variations in NARIGP performance. The unstandardized coefficient ($\beta = 0.641$, $p = 0.000$) shows that for each unit increase in project planning, NARIGP performance improves by 0.641 units, reinforcing the critical role of structured and effective planning in achieving project success. Additionally, the standardized beta coefficient ($\beta = 0.754$) highlights a strong positive effect of project planning on performance, making it a key determinant of project success. These findings align with previous research, such as Hashakimama (2022), who established that structured project planning significantly enhances the effectiveness of sustainability initiatives. Similarly, Muute and James (2019) emphasized that high-quality planning leads to better project outcomes and recommended continuous workforce training to improve planning effectiveness. However, contrary perspectives exist; for example, Mwanza et al. (2024) found that poor project planning had a detrimental impact on construction project performance, suggesting that the quality of planning efforts is a crucial differentiating factor. Githenya and Ngugi (2014), as well as Chesinya and Wanyoike (2016), further support the positive impact of planning, particularly in Community Development Fund (CDF) projects, emphasizing that improved planning practices lead to better project implementation. Overall, the findings of this study confirm that effective project planning is instrumental in enhancing project performance, reinforcing the need for organizations to invest in robust planning processes to achieve successful outcomes.

Table 5 Regression analysis

	Unstandardized		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.159	0.175		6.639	0.000
Project Planning	0.641	0.057	0.754	11.246	0.000
Model Summary Statistics					
R	0.754				
R Square	0.568				
Adjusted R Square	0.564				
ANOVA for goodness of fit)					
F	126.472				
Sig.	.000				

a Dependent Variable: NARIGP performance

Therefore, based on unstandardized coefficient the following regression equation derived from the model is:

$$Y = 1.159 + 0.754PP + \varepsilon$$

Where;

Y = NARIGP performance
 PP = Project Planning
 ε = error term

5.0 Conclusions

the study concludes that effective project planning is key to improving NARIGP performance. The findings indicate that clear communication of project objectives and the articulation of tasks, deliverables, and timelines are crucial for stakeholder engagement and overall project success. While there are some concerns regarding the clarity and communication of project objectives, the recognition of effective risk management strategies is promising, suggesting that certain aspects of the planning process are functioning well. Furthermore, the analysis highlights the importance of stakeholder involvement in decision-making processes, which enhances project outcomes. The positive correlation between stakeholder participation and NARIGP performance underscores the critical role active involvement plays in driving project success. To maximize the effectiveness of project planning, it is essential for project management to improve opportunities for feedback, ensure adequate resource access, and foster open lines of communication among stakeholders. Addressing the identified areas for improvement will help create a more collaborative environment, ensuring that stakeholders feel valued and engaged, ultimately contributing to the successful execution of NARIGP initiatives.

6.0 Recommendations

Based on the objectives, findings, and conclusions of this study, the following study recommendations are made. Clear communication of project objectives, tasks, deliverables, and timelines is crucial for achieving stakeholder alignment and commitment. The study

revealed concerns regarding the lack of clarity in these areas, which can impede effective participation. Therefore, it is essential for project management to articulate these elements explicitly and succinctly. Implementing structured communication strategies, including regular briefings and updates, will facilitate better understanding among stakeholders regarding their roles and contributions, ultimately leading to a more unified approach to achieving project goals.

7.0 Further Research

This study used a descriptive research design with time constraints. The study's design is deemed highly restrictive by the researcher, who suggests conducting a longer, more flexible study that may yield more precise and trustworthy findings regarding the influence of project planning on Kenyan NARIGP performance. Because this study was conducted in Kenya, it can be viewed as a more limited geographic region. The study was restricted to the agriculture industry only. Studies need to be undertaken to find if there is a variation in the influence of project management practices on the performance of organization in other industries. This study relied on perceptual measures of performance which could be largely biased. Studies should be the find if the outcome would be different if financial and non-financial measures of performance were used.

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