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PROJECT MANAGEMENT CONTROLS AND PERFORMANCE OF SMALL-SCALE COFFEE FARMER ASSISTANCE PROJECTS IN KISII COUNTY, KENYA

[1] Oyero Austine Suku, [2] Dr. Nyang'au Samson Paul

[1]Master's Student, Jomo Kenyatta University of Agriculture and Technology
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Coffee is a significant agricultural commodity on a global scale. It plays a significant role in bolstering the National Gross Domestic Product (GDP), generating tax revenue, creating employment opportunities, ensuring food security, and mitigating socioeconomic inequalities. The coffee industry provides employment opportunities for around 25 million individuals across various countries involved in coffee cultivation on a global scale. The decline in coffee production throughout the 1990s, caused by the global coffee prices, had a detrimental impact on small-scale farmers, leading to an escalation in poverty due to insufficient financial resources to sustain coffee production. In Kenya, it is noteworthy that approximately 80% of coffee production is attributed to a population of 700,000 small-scale farmers. However, it is concerning that the production levels have experienced a significant decline over time. Specifically, the production of coffee has decreased from 130,000 metric tons in the 1987/88 period to a current estimate of 55,000 metric tons. This decline in production has had adverse effects on the national economy, as evidenced by the decrease in the contribution of the coffee industry to the country's Gross Domestic Product (GDP). Previously, the coffee sector accounted for 40% of the national GDP, but it has now dwindled to a mere 3.2%. Furthermore, this decline has also resulted in the loss of numerous employment opportunities within the industry. Kisii County is widely recognized for its exceptional coffee quality. However, the production of coffee in this region has been facing a decline due to several challenges. The study mainly focused on project controls and Performance of Small Scale Coffee Farmer Assistance Projects in Kisii County, Kenya. The study was based on the following specific objectives; - to determine the influence of project planning, project scheduling on Performance of Small-Scale Coffee Farmer Assistance Projects in Kisii County, Kenya. This particular study adopted descriptive research design. This particular design facilitates interpretation, understanding and examining the relationship between a given study. This particular study comprised of 300 Small Scale Coffee Farmers. The target population included National Sustainability Curriculum projects, commodities fund projects and coffee research institute projects. The study used Yamane Taro formula to get a sample size of 171 respondents. The study adopted questionnaires for purposes of collecting primary data from the field. The findings revealed that project planning had the highest positive impact on project performance ($B = 0.478$, $p < 0.01$), followed by project scheduling ($B = 0.295$, $p < 0.01$), The regression model demonstrated a strong fit, with an R-squared value of 0.709, indicating that 70.9% of the variance in project performance could be explained by these variables. The study concludes that effective project management controls significantly enhance project performance. It recommends prioritizing thorough project planning developing detailed project schedules to ensure the success of Small Scale Coffee Farmer Assistance Projects.

Key Words: Project Controls, Performance of Small Scale Coffee Farmer, Assistance Projects, Project Planning, Project Scheduling

Background of the Study

The implementation of project management controls plays a crucial role in ensuring the success of projects by aligning them with intended objectives, adhering to budget and time constraints, and managing risks effectively. These controls encompass key elements such as project planning, risk management, scheduling, and change management (Project Management Institute, 2021). Without proper oversight, projects can lose focus on their primary objectives, making it imperative to establish robust project management controls (Zwikael & Smyrk, 2019). These controls focus on performance, cost, and time, aiming to identify and address issues proactively (Kerzner, 2019; Caccamese & Bragantini, 2019). Effective project management controls enhance governance and accountability, ensuring deliverables meet quality standards and stakeholder expectations (Harrison & Lock, 2017). They are particularly crucial in complex projects with higher uncertainties and risks (Muller & Turner, 2021).

The performance of small-scale coffee farmer assistance projects hinges on effective project management controls. These controls include monitoring and evaluation systems, financial management, stakeholder engagement, and adaptive strategies to address unforeseen challenges. For example, the adaptation strategies of small-scale tea and coffee farmers in Kenya to climate change were bolstered by robust M&E frameworks (Karuri, 2020). Effective project management controls directly influence the outcomes of such projects, including productivity, sustainability, and farmer livelihoods.

Project planning outlines the scope, objectives, and resources required for successful execution. Regular monitoring and evaluation (M&E) ensure projects stay on track. Financial management practices involve budgeting, accounting, and financial reporting to ensure efficient use of funds (Sarirahayu & Aprianingsih, 2018). Project scheduling ensures tasks are completed on time, while adaptive project design and implementation enable projects to remain relevant and effective over time (Shapiro-Garza et al., 2020).

Change management is vital for addressing unforeseen challenges and ensuring projects stay aligned with their goals. Projects with robust controls achieve better outcomes in terms of productivity, quality, and farmer incomes. Studies show that multiple certification schemes can improve the economic conditions of smallholder farmers by providing technical assistance and market access (Dietz et al., 2020). Value co-creation projects enhance performance by involving farmers as business partners and providing resources for growth (Candelo et al., 2018).

Despite these benefits, challenges remain, such as pest and disease control, fluctuating market prices, and the need for continuous capacity building among farmers. Addressing these challenges requires ongoing support and innovative approaches. For instance, initiatives in Kenya emphasize the need for younger farmer participation and income diversification (Wairegi et al., 2018). Wildlife-friendly practices among small-holder farmers in Indonesia demonstrate the potential for integrating sustainability with productivity (Campera et al., 2021).

This study, therefore, sought to examine the influence of project management controls, specifically focusing on project planning, scheduling, on the performance of small-scale coffee farmer assistance projects. By understanding these dynamics, the study aims to provide insights and recommendations for enhancing the effectiveness and sustainability of these critical projects.

Statement of the Problem

The success of a project is a primary consideration in any endeavor, and various strategies are employed to ensure better project performance. Time and cost are two critical indicators of project success; however, it has been found that 9 out of 10 projects experience cost overruns (Flyvbjerg et al., 2019), and these overruns can be as high as 183% (Odeck, 2019). Coffee is a significant agricultural commodity globally, playing a crucial role in national Gross Domestic

Product (GDP), generating tax revenue, fostering job development, enhancing food security, and reducing socioeconomic inequality.

Kisii County, widely recognized for its exceptional coffee quality, faces a significant decline in coffee production. The county's small-scale coffee farmers, who contribute around 30% of the county's agricultural income (Kenya National Bureau of Statistics, 2020), produce an average yield of about 300 kg per hectare, significantly lower than the national average of 500 kg per hectare (Kenya Coffee Platform, 2019). This decline is due to several challenges, including the absence of effective project controls, fluctuations in international market prices, high input costs, competition from alternative enterprises, and inefficiencies in cooperative management.

Project management controls, such as project planning, and scheduling, are crucial for the success of these assistance projects. A study by the Coffee Research Institute (2020) found that 60% of small-scale coffee farmer assistance projects in Kisii County failed to meet their intended objectives due to poor project management practices. Furthermore, only 40% of these projects were completed within the planned budget and timeframe, highlighting significant issues in scheduling and financial management (Coffee Research Institute, 2020).

The financial pressures on small-scale coffee farmers are exacerbated by statutory deductions and taxes, which account for approximately 12.8% of the auction price. Cooperative society deductions continue to account for the majority portion. Recent significant increases in expenditures associated with coffee production are primarily due to rising costs of purchasing agricultural inputs (Karanja & Nyoro, 2002). This rise in costs can be attributed to factors such as currency devaluation, inflation, and inefficiencies in input markets. Additionally, inadequate road infrastructure has been identified as a key factor in the increased costs of inputs, mostly due to elevated transportation expenses (Kegonde, 2005).

Therefore, this study seeks to examine the influence of project management controls on the performance of small-scale coffee farmer assistance projects in Kisii County, Kenya. By focusing on project planning, and scheduling, the study aims to provide insights and recommendations for enhancing the effectiveness and sustainability of these projects, ultimately improving the productivity and profitability of small-scale coffee farmers in the region.

Objectives of the Study

The study mainly focused on the influence of project management controls on Performance of Small Scale Coffee Farmer Assistance Projects in Kisii County, Kenya.

The study was based on the following specific objectives;-

i. To determine the influence of project planning on Performance of Small Scale Coffee Farmer Assistance Projects in Kisii County, Kenya.
ii. To establish the influence of project scheduling on Performance of Small Scale Coffee Farmer Assistance Projects in Kisii County, Kenya.

LITERATURE REVIEW

Theoretical Review

Theory of Constraints

The theory originated as a tool for facilitating production scheduling and was formulated by Dr. Eliyahu Goldratt during the 1970s. During that period, the concept was often known as a schedule designed to enhance production efficiency. Consequently, it was implemented in the creation of a software package known as optimized production technology. Approximately ten years later, Goldratt, in collaboration with other individuals, advocated for a paradigm shift in people's approach to problem-solving. Rather than simply using computer programs to automate existing methods, Goldratt emphasized the necessity of

reevaluating and modifying one's mindset and practices. This statement pertains to the failures encountered within the turnkey package, as discussed by Davis and Mabin (2009). According to Togar and Ramaswami (2004), the Theory of Constraints is a methodology that seeks to facilitate significant changes by directing attention on constraints that impede the attainment of higher performance levels. According to the theory, it is observed that businesses should possess at least one constraint that necessitates attention in order to optimize their outputs.

Constraints can be categorized into four distinct groups. The initial category pertains to political limitations, encompassing the parameters of initiatives as well as their overarching objectives and purposes. The second aspect pertains to technical limitations associated with many factors such as technological capabilities, climatic circumstances, topography, geological characteristics, pre-existing infrastructure, and expertise. The third aspect pertains to social limitations, encompassing interpersonal connections, hierarchical structures within organizations, anticipated actions, and established norms of conduct. The fourth factor pertains to administrative limitations, encompassing project scopes, timetables, contractual agreements, and budgets (Sebastiano & Ragnhild, 2014). This theory presents a challenge to management teams, urging them to reconsider their approach to organizational goals, their perception of productive behaviors, and their understanding of cost management objectives. Hence, this theory provides support for project planning and the performance of Small Scale Coffee Farmer Assistance Projects in light of these challenges.

Conceptual Framework

The conceptual framework of this study shows the relationship between the independent and the dependent variable (Kothari, 2004). The independent variables are project planning, project fund mobilization, project service outsourcing and the dependent variable is Performance of Small Scale Coffee Farmer Assistance Projects.

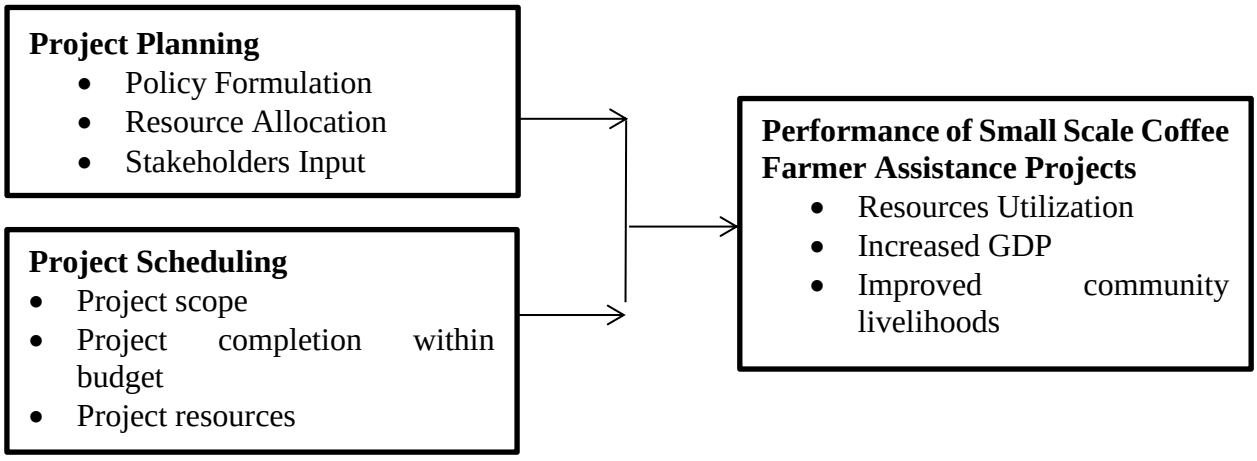

Figure 2. 1: Conceptual Framework

Project Planning

Project planning entails the formulation of objectives and the development of coherent strategies and goals. The statement described above will establish the decision-making framework employed by the project teams. According to Hyer and Brown (2010), a comprehensive plan encompasses various crucial elements. These elements include the identification of purpose, definition of scope, specification of user demands, identification of tasks, allocation of suitable resources, and assignment of responsibilities. To achieve optimal planning, it is crucial to adhere to two fundamental aspects: precisely defining the objectives of the organization and establishing the expected outcomes. Planning entails the execution of a thorough evaluation of the implementation process, taking into account each stage in

isolation. This entails a comprehensive analysis of the precise schedules linked to each task, the significant achievements that must be fulfilled, and the alternative strategy in the event of delays or the necessity for reassessment (Frese et al., 2013). This comment underscores the continuous character of the planning process, which endures until the project is successfully implemented.

The study conducted by Yang, Huang, and Wu (2011) assessed the correlation between project planning and the achievement of project objectives. The study utilized questionnaires to evaluate the leadership style of the project manager, as well as the project's success in terms of its scope, budget, quality, and customer satisfaction. The results of the study suggest that there is a favorable relationship between better project management leadership and improved interpersonal ties among members of a project team. The study's results demonstrate a statistically significant correlation between the spirit of teamwork and project performance.

Project Scheduling

The process of project scheduling involves the identification and distribution of diverse resources, encompassing technical, physical, human, and particularly, financial resources. The strategic arrangement of resources is vital to get efficient project fulfillment. Miller and Lessard (2011) assert that financial resources have a crucial impact on construction projects. According to Crivelli and Gupta (2013), project contractors must get these resources in order to procure required machinery and equipment, as well as to perform diverse financial responsibilities such as fueling machines and vehicles, maintaining equipment and machinery, and meeting wage and salary obligations. Furthermore, financial resources are employed to address various expenses related to the project. The effective management and scheduling of human resources are crucial elements that contribute to the success of a project, alongside physical and financial resources (Kihoro & Waiganjo, 2015).

Empirical Review

Project Planning and Project Performance

To successfully execute complex projects, it is important to develop and obtain formal approval for a comprehensive strategy. The significance of this platform lies in its role as a facilitator for project implementation and completion. According to Chandra (2010), the strategic plans should encompass a comprehensive delineation of the various stages included throughout the entirety of the project life cycle.

These plans involve the establishment of goals accompanied by well-constructed policies and objectives. The statement will establish the decision-making framework utilized by the project teams. Hyer and Brown (2010) assert that a comprehensive plan comprises several essential components, including purpose identification, scope definition, stated user needs, job identification, appropriate time allocation, cost allocation, and resource allocation. In order to ensure effective planning, it is imperative to adhere to two key aspects: clearly defining the organization's objectives and outlining the anticipated outcomes. Planning involves conducting a comprehensive assessment of the implementation process, considering each stage individually. This includes a thorough examination of the specific timetables associated with each work, the milestones that need to be accomplished, and the contingency plan in case of setbacks or the need for re-planning (Frese *et al.*, 2013). This observation highlights the ongoing nature of the planning process, which persists until the project is effectively executed.

The study conducted by Novo, Landis, and Haley (2017) examined the relationship between project planning and the effectiveness of project management. The purpose of this study was to investigate the skills and competencies of project managers in relation to leadership and their potential impact on project success. The findings of the study indicate a clear correlation between the planning process and the competency of the project manager. There exists a substantial correlation between the leadership skills of project managers and the success of projects.

The study conducted by Buba and Tanko (2017) investigated the impact of project planning on the quality performance of construction projects. A survey was conducted in Nigeria, targeting important groups of respondents consisting of Quantity Surveyors, Builders, and Architects who held the role of project managers. A total of 43 questionnaires were distributed to these individuals. It has been determined that the proficiency of a project manager in providing guidance is the most effective leadership approach, resulting in enhanced creative excellence of the project and improved inter-functional relationships.

In their study, Yang, Huang, and Wu (2011) investigated the relationship between project planning and project success. Questionnaires were employed in this study to assess the leadership style of the project manager, as well as the project's success with respect to its scope, budget, quality, and client satisfaction. The study's findings indicate that enhanced project management leadership is positively correlated with improved connections among project team members. The findings of the study indicate that there is a statistically significant relationship between the spirit of teamwork and project performance.

The study conducted by Abu-Hussein, Hyassat, Sweis, Alawneh, and Al-Debei (2016) aimed to evaluate the impact of project management parameters on project resources. The research was carried out in Oracle firms located in Jordan. The study employed primary data collection methods by developing structured questionnaires. The data was subsequently subjected to analysis using both descriptive and inferential statistical methods. According to Yun et al. (2016), effective project planning necessitates the acquisition of certain skills by project managers. These skills include the ability to collect and analyze information, communicate with key stakeholders, negotiate resources, secure the involvement and commitment of top-level management, and establish measurable milestones. This assertion is further supported by Borrmann, Hochmuth, König, Liebich, and Singer (2016), who observed that effective organizational planning plays a crucial role in facilitating the coordination and alignment of operational activities with an organization's ethical principles and objectives. Nguyen, Killen, Kock, and Gemünden (2018) also recognize the need of adequately evaluating and comprehending planning skills and planning knowledge in practical contexts.

The study conducted by Locatelli, Invernizzi, and Brookes (2017) examined the impact of project features on the overall performance of organizations. The research was carried out in Europe. This study focuses on the planning process within infrastructure projects, with a specific emphasis on the transport sector. The data were gathered through a structured questionnaire and afterwards subjected to factor analysis for analysis. The study revealed that when there is a lack of sufficient understanding in project management, its implementation might result in subpar planning owing to incomplete project plans, ultimately leading to a decrease in performance. Hassan (2017) observed that contemporary management approaches in projects do not guarantee successful outcomes in terms of quality attainment and effective planning. The author establishes a connection between the failure and the insufficient examination of significant aspects that impact the practices, as perceived by the project stakeholders (Jinet al., 2017). The optimization of project efficiency in terms of cost, time, and resources is of utmost importance (Juras, 2019).

In a study conducted by Elzomor, Burke, Parrish, and Gibson (2018), the researchers examined the impact of Front-End Planning on project performance. The research focused on the front-end planning process in infrastructure projects, encompassing both large-scale and small-scale endeavors. The data was obtained by use of structured questionnaires. The acquired data was subsequently encoded using SPSS, and quantitative and inferential statistical analyses were conducted. According to Locatelli, Invernizzi, and Brookes (2017), the significance and influence of planning have been recognized in relation to large-scale industrial projects. Their study concludes that inadequate definition of project scope during the planning phase can lead to schedule delays and cost overruns.

Kagiri and Wainaina (2017) observed that these phenomena were primarily attributable to inadequate project initiation and front-end planning, which consequently led to a deficient definition of project scope. They emphasized that making significant alterations to the specific location, scope, objectives, or other essential elements after the initial phase has commenced can render the project unmanageable. Kagiri and Wainaina (2017) focused their study on the front-end planning process in infrastructure projects, encompassing projects of varying scales.

The study conducted by Sinesilassie, Tabish, and Jha (2018) focused on examining the essential elements that influence the cost performance of projects. The study focused on identifying the primary elements that influence the impact of operational costs on project performance. The research was carried out on a public construction project in Ethiopia. The study had a sample size of 600 individuals who were employed as staff members on significant highway construction projects located in Addis Ababa. The research employed closed-ended questionnaires as a means of data collection. The acquired data was subsequently organized and encoded using the Statistical Package for the Social Sciences (SPSS) software for the purpose of data analysis. The study subsequently employed both descriptive and inferential statistical analyses. Project execution often encounters challenges related to schedule deviations and expense overruns. The aforementioned issues arise due to inadequate identification of risks during the initial planning phase of the project (Kihoro & Waiganjo, 2015).

Project Scheduling and Project Performance

According to Crivelli and Gupta (2013), the process of project scheduling entails the recognition and allocation of various resources, including technical, physical, human, and notably, financial resources. This organization of resources is crucial in order to achieve effective project completion. According to Miller and Lessard (2011), financial resources play a critical role in construction projects. These resources are essential for project contractors to acquire necessary machinery and equipment, as well as to meet various financial obligations such as fueling machines and vehicles, maintaining equipment and machinery, and fulfilling wage and salary requirements. Additionally, financial resources are also utilized to cover miscellaneous costs associated with the project. In addition to physical and financial resources, the management and scheduling of human resources are essential factors contributing to the success of a project (Kihoro & Waiganjo, 2015).

The study conducted by Obegi and Kimutai (2017) examined the impact of resource scheduling on the performance of NGO projects in Nairobi City County. The findings of the study emphasized that efficient resource scheduling plays a crucial role in determining the success of projects. The research findings emphasized the importance of periodically reviewing the budget to evaluate spending in relation to project budgets, project modifications throughout implementation, the preparedness of project personnel, and regular assessments of project performance. The project's performance was impacted by the use of resource scheduling, as it facilitated adherence to budgetary constraints and allowed for necessary adjustments to accommodate the dynamic character of the project. Additionally, resource scheduling guaranteed that the project team had access to the necessary resources to successfully carry out their tasks.

Pinha and Ahluwalia (2019) conducted a study examining the impact of flexible resource management on project duration and cost. They emphasize that inadequate resource management frequently serves as the primary factor contributing to cost overruns and schedule delays. The authors present a methodology designed to enable project managers to evaluate various situations, leading to a subsequent reduction in project costs and length. The authors introduce a novel methodology for the allocation of resources and administration of projects, which holds significant importance in contemporary project scheduling methodologies.

RESEARCH METHODOLOGY

The present study employed a descriptive research design. Small scale farmers participate in national Sustainability Curriculum Projects, Commodities Fund Projects and Coffee Research Institute Projects. Therefore, these projects were the unit of analysis while the unit of observation was the 600 individual small-scale coffee farmers participating in these projects. In determining the sample size, of 240, the study employed Yamane's (2011) formula, where a standard error of 95% was considered in the sampling calculation. The researcher employed closed-ended questionnaires as a means of data collection in the field. The research employed a combination of inferential and descriptive statistics to examine quantitative data, encompassing regression analysis, standard deviations, and means. Data analysis was conducted using the statistical programme SPSS V.26. The study employed regression analysis in conjunction with descriptive statistics. The objective is to assess the statistical significance of various independent variables on the selected dependent variables. To provide a comprehensive examination, it is imperative that the dataset being examined conforms to the fundamental assumptions of linear regression.

RESEARCH FINDINGS AND DISCUSSION

The study targeted a sample size of 240 respondents out of which 24 participated in the pilot test and were excluded in the final study leaving 216. Out of the 216 questionnaires distributed, 210 were completed and returned, representing a response rate of 97.2%, which is considered excellent for data analysis and reporting (Metsamuuronen, 2017).

Descriptive Data Analysis

In this section, the study presents descriptive statistics analysis based on the data collected for the study. The analysis includes measures such as mean, and standard deviation to describe the data comprehensively. The study requested respondents to indicate the extent to which they agreed or disagreed with various statements that examine how Digital Banking technologies have influenced financial inclusion among banks in Nairobi City County, Kenya. They used the scale of 1-5 where 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. The means and standard deviations were used to interpret the findings where a mean value of 1-1.4 was strongly disagree, 1.5-2.4 disagree, 2.5-3.4 neutral, 3.5-4.4 agree and 4.5-5 strongly agree. Standard deviation greater than 2 was considered large meaning responses were widely spread out and not tightly clustered around the mean.

Project Planning

The first objective of the study was to determine the influence of project planning on the performance of small scale coffee farmer assistance projects in Kisii County, Kenya. Respondents were asked whether their projects involve farmers in project planning. Table 4.1 presents the findings obtained.

Table 4.1: Farmer Involvement in Project Planning

Response	Frequency	Percentage
Agree	125	59.5%
Disagree	65	31.0%
Not sure	20	9.5%
Total	**210**	**100.0%**

The findings indicate that a majority of the respondents (59.5%) agreed that their projects involve farmers in project planning, while 31.0% disagreed and 9.5% were not sure. This suggests that most small scale coffee farmer assistance projects in Kisii County actively engage farmers in the planning process, which is crucial for aligning project objectives with farmer needs and ensuring stakeholder buy-in.

Respondents were also asked to indicate the extent to which they agree with statements on project planning. Table 4.2 presents a summary of the findings obtained.

Table 4.2: Descriptive Analysis for Project Planning

Project Planning Factors	Mean	Std. Dev.
Adoption of policy formulation to enhance projects	4.021	0.651
Proper planning for small scale coffee projects	3.979	0.713
Adequate resource allocation on small scale coffee projects	3.923	0.745
Capacity building in small scale coffee projects	3.871	0.682
Incorporation of all stakeholders in small scale coffee projects	3.769	0.778
Project planning vital towards supporting the operations of small scale coffee projects	3.813	0.781
Aggregate Score	**3.896**	**0.725**

The findings show that respondents agreed that the adoption of policy formulation enhances projects (M=4.021, SD=0.651); proper planning for small scale coffee projects is crucial (M=3.979, SD=0.713); and adequate resource allocation positively influences project performance (M=3.923, SD=0.745). Capacity building in small scale coffee projects was also considered important (M=3.871, SD=0.682), along with the incorporation of all stakeholders in project planning (M=3.769, SD=0.778). Respondents agreed that project planning is vital for supporting the operations of small scale coffee projects (M=3.813, SD=0.781). The aggregate mean of 3.896 (SD=0.725) indicates that respondents generally agree that project planning influences the performance of small scale coffee farmer assistance projects.

These results align with the literature, such as the assertions by Hyer and Brown (2010) that emphasize the importance of comprehensive project plans, including purpose identification, scope definition, and resource allocation. Additionally, Frese et al. (2013) highlight the necessity of detailed planning and continuous reassessment to ensure effective project execution. This study's findings support these assertions by demonstrating that well-defined project planning significantly contributes to the success of small scale coffee farmer assistance projects.

Project Scheduling

The second objective of the study was to establish the influence of project scheduling on the performance of small scale coffee farmer assistance projects in Kisii County, Kenya. Respondents were asked whether their projects involve farmers in project scheduling. Table 4.3 presents the findings obtained.

Table 4. 3: Farmer Involvement in Project Scheduling

Response	Frequency	Percentage
Agree	120	57.1%
Disagree	65	31.0%
Not sure	25	11.9%
Total	**210**	**100.0%**

The findings indicate that a majority of the respondents (57.1%) agreed that their projects involve farmers in project scheduling, while 31.0% disagreed and 11.9% were not sure. This suggests that most projects recognize the importance of involving farmers in scheduling to ensure that project timelines align with agricultural cycles and farmer availability.

Respondents were also asked to indicate the extent to which they agree with statements on project scheduling. Table 4.4 presents a summary of the findings obtained.

Table 4. 4: Descriptive Analysis for Project Scheduling

Project Scheduling Factors	Mean	Std. Dev.
Every activity undertaken in projects is under project scope	3.887	0.721
Every activity undertaken in projects is under project budget	3.853	0.753
Project scheduling aids towards project completion within budget and project plan	3.812	0.683
Every farmer understands the benefits of project scheduling	3.785	0.741
Clearly stipulated project budget and project work plan	3.821	0.774
Aggregate Score	**3.832**	**0.734**

The findings show that respondents agreed that every activity undertaken in projects is under project scope (M=3.887, SD=0.721); every activity is under project budget (M=3.853, SD=0.753); and that project scheduling aids towards project completion within budget and project plan (M=3.812, SD=0.683). Respondents also agreed that every farmer understands the benefits of project scheduling (M=3.785, SD=0.741) and that projects have clearly stipulated budgets and work plans (M=3.821, SD=0.774). The aggregate mean of 3.832 (SD=0.734) indicates that respondents generally agree that project scheduling influences the performance of small scale coffee farmer assistance projects.

These findings align with the literature, such as Crivelli and Gupta (2013) who emphasize the importance of resource allocation and scheduling in project management. Miller and Lessard (2011) also highlight the critical role of financial resources and scheduling in ensuring project success. This study corroborates these assertions by demonstrating that proper project scheduling significantly enhances the performance of small scale coffee farmer assistance projects.

Performance of Small-Scale Farmers Assistance Projects

The main focus of the study was to examine how project management controls have influenced the performance of small-scale coffee farmer assistance projects in Kisii County, Kenya. Respondents were asked to indicate the extent to which they agree with statements on the performance of these projects. Table 4.5 presents a summary of the findings obtained.

Table 4. 5: Descriptive Analysis for Performance of Small Scale Farmers Assistance Projects

Performance Factors	Mean	Std. Dev.
Projects are completed within set budgets	3.901	0.694
Projects are completed within set time frames	3.881	0.705
Projects are vital towards growth of Country GDP	3.854	0.723
Projects are vital towards growth of county revenue	3.802	0.742
Projects are vital towards sustaining livelihoods of local communities	3.829	0.751
Projects enhance value addition	3.834	0.783
Aggregate Score	**3.867**	**0.733**

The findings show that respondents agreed that projects are completed within set budgets (M=3.901, SD=0.694); projects are completed within set time frames (M=3.881, SD=0.705); and that projects are vital towards the growth of the country GDP (M=3.854, SD=0.723). Projects were also seen as vital towards the growth of county revenue (M=3.802, SD=0.742); sustaining livelihoods of local communities (M=3.829, SD=0.751); and enhancing value addition (M=3.834, SD=0.783). The aggregate mean of 3.867 (SD=0.733) indicates that respondents generally agree that the performance of small scale coffee farmer assistance projects is significantly influenced by project management controls.

These findings are consistent with the literature, such as the work by Locatelli, Invernizzi, and Brookes (2017), who found that effective project management practices, including planning,

risk management, scheduling, and change management, are crucial for project success. Additionally, the study by Kagiri and Wainaina (2017) highlights the importance of front-end planning in achieving project objectives. This study reaffirms that robust project management controls are essential for enhancing the performance of small scale coffee farmer assistance projects in Kisii County, Kenya.

Correlation Analysis

The study computed correlation analysis to test the strength and the direction of the relationship between project management controls and the performance of small scale coffee farmer assistance projects in Kisii County, Kenya. If the correlation values are r = ±0.1 to ±0.29 then the relationship between the two variables is small, if it is r = ±0.3 to ±0.49 the relationship is medium, and when r= ±0.5 and above there is a strong relationship. Table 4.6 presents correlation analysis findings for this study.

Table 4. 6: Correlations

		Performance	Planning	Scheduling
Performance	Pearson Correlation	1		
	Sig. (1-tailed)			
	N	227		
Project Planning	Pearson Correlation	.780**	1	
	Sig. (1-tailed)	.000		
	N	210	210	
Project Scheduling	Pearson Correlation	.713**	.126	1
	Sig. (1-tailed)	.000	.369	
	N	210	210	210

Project Planning has the highest correlation coefficient (r=0.780, p<0.01) with project performance. This strong positive correlation suggests that effective project planning is crucial for the success of small scale coffee farmer assistance projects. Comprehensive project plans that include purpose identification, scope definition, resource allocation, and stakeholder engagement are essential for achieving project objectives. This finding aligns with Hyer and Brown (2010), who emphasize the importance of detailed planning for project success. The significant correlation indicates that projects with robust planning processes are more likely to perform better.

Project Scheduling shows a significant positive correlation with project performance (r=0.713, p<0.01). Proper scheduling ensures that project activities are completed within the stipulated scope and budget, which is critical for meeting project goals. Crivelli and Gupta (2013) emphasize the importance of timely completion of project tasks, while Miller and Lessard (2011) highlight the role of scheduling in ensuring project success. The strong correlation indicates that projects with effective scheduling practices are more likely to achieve their objectives.

Regression Analysis

Table 4. 7: Regression Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.412	0.202		2.040	.005
Project Planning	0.478	0.073	0.486	6.548	.000
Project Scheduling	0.295	0.071	0.308	4.155	.000

The fitted regression model is as follows:

$$Y = 0.412 + 0.478\ X_1 + 0.295\ X_2$$

Where:

Y= Performance of small scale coffee farmer assistance projects

X1 = Project Planning

X2 = Project Scheduling

Project Planning has the highest beta coefficient (B=0.478, $p<0.01$), indicating it has the greatest influence on project performance among the variables studied. The significant p-value (0.000) suggests that this influence is highly reliable. This strong influence is consistent with literature such as Hyer and Brown (2010), who emphasize the importance of comprehensive project plans. Effective project planning involves purpose identification, scope definition, resource allocation, and stakeholder engagement, which are crucial for project success. The high beta coefficient in this study suggests that well-defined project planning significantly contributes to the success of small scale coffee farmer assistance projects in Kisii County, Kenya.

Project Scheduling has a significant beta coefficient (B=0.295, $p<0.01$), indicating its importance in influencing project performance. The significant p-value (0.000) indicates strong statistical reliability. Proper scheduling ensures that project activities are completed within the stipulated scope and budget, contributing to the overall success of the project. This aligns with the work of Crivelli and Gupta (2013) who emphasize the importance of timely completion of project tasks, while Miller and Lessard (2011) highlight the role of scheduling in ensuring project success. The significant beta coefficient indicates that projects with effective scheduling practices are more likely to achieve their objectives.

Conclusions

The findings suggest that project planning plays a crucial role in enhancing the performance of Small Scale Coffee Farmer Assistance Projects in Kisii County, Kenya. Respondents' positive perceptions of planning activities such as resource allocation and stakeholder involvement indicate the importance of thorough planning in achieving project success. Correlation and regression analyses further support these findings, demonstrating a significant positive association between project planning and project performance. Therefore, the study concludes that effective project planning positively contributes to project performance, enabling better project outcomes.

Project scheduling emerges as a key driver of project performance in Small Scale Coffee Farmer Assistance Projects, according to the study findings. Respondents' perceptions of the role of scheduling in adhering to project scope and budget align with the positive correlation and regression results, indicating a significant association between scheduling and project performance. Therefore, the study concludes that proper scheduling contributes to the advancement of project performance objectives, facilitating timely and budget-compliant project completion.

Recommendations

Project Planning

Based on the findings regarding the influence of project planning on project performance, it is recommended that project managers prioritize thorough planning activities, including comprehensive resource allocation, clear scope definition, and stakeholder engagement. Training programs should be implemented to enhance the planning skills of project managers and team members. Additionally, fostering collaboration among stakeholders can facilitate effective planning processes. Continuous evaluation and adjustment of project plans should be encouraged to address emerging challenges and opportunities. By leveraging these recommendations, project managers can enhance their planning capabilities, leading to improved project performance in Small Scale Coffee Farmer Assistance Projects.

Project Scheduling

To capitalize on the potential of project scheduling in advancing project performance objectives, it is recommended that project managers develop detailed and realistic project schedules. Training programs should be implemented to enhance the scheduling skills of project managers and team members. Collaboration among project stakeholders can facilitate the development of comprehensive work plans. Regular monitoring and adjustment of project schedules should be conducted to address deviations and ensure timely completion of project activities. By embracing these recommendations, project managers can create a conducive environment for successful project completion within budget and planned timelines.

Suggestions for Further Studies

Future studies should explore the long-term impact of project management controls on the performance of Small Scale Coffee Farmer Assistance Projects across different regions to provide valuable insights into the contextual factors influencing project success. Comparative studies across various agricultural sectors could offer a broader perspective on the effectiveness of project management controls. Additionally, qualitative research methods, such as interviews and focus groups, could complement quantitative findings by offering deeper insights into the perceptions and experiences of project stakeholders. Exploring the role of regulatory frameworks and policy interventions in shaping the adoption and impact of project management practices could also be a fruitful area for future research.

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