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Project Management Techniques and Project Performance in Food
and Beverage Manufacturing Firms in Uasin Gishu, Kenya



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Project Management Techniques and Project Performance in Food and Beverage Manufacturing Firms in Uasin Gishu, Kenya

 ¹*Immaculate Jepchirchir, ²Dr. Faith Mutwiri

¹Masters Student, Jomo Kenyatta University of Agriculture and Technology

²Lecturer, Jomo Kenyatta University of Agriculture and Technology

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ABSTRACT

Purpose: This study focused on establishing the influence of project management techniques on project implementation in food and beverage manufacturing firms in Uasin Gishu County, Kenya. Specifically, the study focused to establish the influence of project planning on project implementation in food and beverage manufacturing firms in Uasin Gishu County, Kenya and to establish the influence of top management support on project implementation in food and beverage manufacturing firms in Uasin Gishu County, Kenya. This study was anchored on Planning Theory and Resource-Based View (RBV) theory.

Methodology: The study used the descriptive research design. This study targeted food and beverage manufacturing firms in Uasin Gishu County, Kenya. The unit of observation was Project Managers, Surveyors and Project team Members working with food and beverage manufacturing firms in Uasin Gishu County, Kenya. The study's sample size of 149 respondents was reached at using Krejcie and Morgan sample size determination formula. Questionnaires were used for data collection. Quantitative data was coded then analyzed using Statistical Package for Social Sciences (SPSS) computer software version 28. Descriptive statistics was used to analyze the data in frequency distributions and percentages which were presented in tables and figures. The study also analysed the data using inferential statistics which comprised of correlation analysis and regression analysis.

Findings: The study found that project planning has a positive and significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. In addition, the study found that top management support has a positive and significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Unique Contribution to Theory, Practice and Policy: Based on the findings, the study recommends that the management of food and beverage manufacturing firms in Kenya should strengthen project planning by adopting structured and data-driven planning frameworks that clearly define project scope, timelines, resource allocation, and risk mitigation strategies before implementation.

Key Words: *Project Management Techniques, Project Planning, Top Management Support, Food and Beverage Manufacturing Firms*

Background of the Study

The manufacturing sector plays a critical role in global economic growth, technological advancement, and employment creation. It is a major contributor to industrial development, productivity enhancement, and value addition across economies (Radek, 2022). Globally, manufacturing contributes approximately 16% of gross domestic product (GDP) and provides about 14% of total employment, underscoring its importance as a driver of sustainable economic development (World Bank, 2023; Safia et al., 2023). In advanced economies such as Germany and Japan, manufacturing accounts for more than 20% of national output, reflecting high levels of industrial efficiency and innovation. In contrast, in developing regions including Sub-Saharan Africa, the manufacturing sector is viewed as a catalyst for structural transformation, urbanization, and economic diversification (Christine & William, 2023).

In Kenya, manufacturing is identified as a key pillar for economic growth under Vision 2030, with the government targeting an increase in the sector's contribution to GDP from the current levels to 20%. The food and beverage sub-sector is particularly significant due to its strong linkages with agriculture, employment creation, and export potential. Uasin Gishu County, being one of Kenya's leading agricultural regions, has emerged as a strategic hub for agro-processing and food and beverage manufacturing activities, positioning it as a critical contributor to regional and national industrial development (Golini, Kalchschmidt, & Landoni, 2022).

Despite its strategic importance, the performance of manufacturing projects, especially in developing economies, remains a major concern. Manufacturing firms frequently experience challenges related to cost overruns, schedule delays, scope creep, and quality shortfalls, which negatively affect overall organizational performance (Bashir, Xiaohua, & Osei-Kyei, 2024). Globally, studies indicate that only about 52% of projects are completed within their approved budgets, while less than half achieve their original performance objectives in terms of scope, time, and quality (Project Management Institute [PMI], 2022). These challenges are more pronounced in low- and middle-income countries such as Kenya, where manufacturing firms face constraints including limited technical capacity, inadequate financing, weak stakeholder coordination, and insufficient project planning and control mechanisms (Onifade, Oluwaseyi, & Ibrahim, 2023).

Poor project performance in the manufacturing sector leads to inefficient use of resources, reduced competitiveness, delayed industrialization, and diminished returns on investment. In the food and beverage manufacturing sub-sector, these challenges can further result in supply chain disruptions, compromised product quality, regulatory non-compliance, and loss of market share. As a result, enhancing project performance has become a strategic priority for manufacturing firms seeking to improve productivity, profitability, and long-term sustainability (Kilinga, Jugindar, & Noraini, 2023).

Project Management Techniques (PMTs) have been widely recognized as critical tools for improving project and organizational performance. PMTs encompass structured methodologies,

tools, and processes used to plan, execute, monitor, and control project activities in order to achieve desired outcomes within defined constraints of time, cost, scope, and quality (Musafiri & Dushimimana, 2023). In the manufacturing context, PMTs such as time management, cost control, risk management, quality management, and stakeholder engagement enhance coordination across departments, optimize resource utilization, mitigate uncertainties, and improve decision-making. Effective application of these techniques enables manufacturing firms to align project outcomes with strategic objectives, reduce project failure rates, and foster innovation, particularly in resource-constrained and dynamic environments common in developing economies (Tukundane & Yang, 2024).

Although prior studies have examined project management techniques in construction and infrastructure sectors, limited empirical evidence exists on the influence of project management techniques on project performance within food and beverage manufacturing firms at the county level in Kenya. This study therefore seeks to bridge this gap by examining the influence of project management techniques on the project performance in food and beverage manufacturing firms in Uasin Gishu County, Kenya, with the aim of providing insights that can inform managerial practice, policy formulation, and sustainable industrial development.

Statement of the Problem

The food and beverage manufacturing sector in Uasin Gishu County plays a pivotal role in Kenya's industrial growth, employment creation, and value addition. Despite its strategic importance, the sector continues to face persistent challenges that undermine project performance and organizational efficiency. Empirical evidence indicates that over 60 percent of industrial projects in Kenya exceed their initial budgets, while 55 percent fail to meet scheduled timelines (Musau & Kirui, 2023). County-level audits between 2020 and 2023 further reveal that four out of ten manufacturing projects in Uasin Gishu experienced significant delays, with cost escalations averaging 25 percent above initial estimates (Nyaga, 2023). These inefficiencies reduce production capacity, erode investor confidence, and compromise the sector's contribution to Kenya's Vision 2030 industrialization targets.

Globally, Project Management Techniques (PMTs) such as planning, monitoring, risk management, stakeholder engagement, and effective communication have been shown to significantly improve project success, ensuring that projects are completed within time, budget, and quality constraints (Radek, 2022; Safia et al., 2023). In developing economies, however, the application of these techniques is often limited, fragmented, or informally applied, contributing to recurrent project failures (Owino & Omwenga, 2022; Magagan & Ngugi, 2021). In Kenya, food and beverage manufacturing firms frequently struggle with inadequate planning, poor resource allocation, weak stakeholder coordination, and ineffective monitoring systems, all of which adversely affect project outcomes and organizational performance (Ogero, 2022; Musau & Kirui, 2023).

Furthermore, studies across the region highlight that critical success factors such as top management support, proper documentation, strategic planning, and team development significantly influence project performance in manufacturing and related sectors (Ofori, 2022; Kilinga, Jugindar, & Noraini, 2023; Musafiri & Dushimimana, 2023; Tukundane & Yang, 2024). Despite this, limited empirical research exists on the relationship between PMTs and project performance within food and beverage manufacturing firms at the county level in Kenya, creating a knowledge gap that hampers evidence-based decision-making.

Given these challenges, it is essential to examine how the systematic application of project management techniques can enhance project performance in food and beverage manufacturing firms in Uasin Gishu County. Understanding this relationship provides practical insights for managers and policymakers to improve project planning, control costs, meet timelines, enhance quality, and increase overall productivity. Such findings will not only strengthen firm-level project performance but also contribute to broader county and national industrialization objectives under Vision 2030, positioning Uasin Gishu as a hub for sustainable agro-industrial growth.

Objectives of the Study

General Objective of the study

The general objective of the study was to establish the influence of project management techniques on the project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Specific objectives

The study was guided by the following specific objectives

- i. To examine the influence of project planning on the project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.
- ii. To determine the impact of top management support on the project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Theoretical Review

Planning Theory

Planning Theory provides a strong theoretical basis for explaining how systematic project planning enhances project performance. The theory emphasizes that effective planning involves setting clear objectives, defining activities, allocating resources, estimating costs, scheduling tasks, and establishing control mechanisms before project execution begins (Kerzner, 2022). In projects within food and beverage manufacturing firms, proper planning enables managers to anticipate technical, financial, and operational requirements, thereby improving coordination and efficiency. Planning Theory posits that projects that are well planned are more likely to achieve

timely completion, cost control, and quality outcomes compared to poorly planned projects (PMI, 2021).

In the manufacturing context, projects involve complex processes such as equipment installation, production layout redesign, compliance with food safety regulations, and workforce adjustments, all of which require detailed planning. According to Turner (2020), effective project planning reduces uncertainty and allows organizations to manage constraints related to time, budget, and scope more effectively. Planning Theory further argues that proactive planning supports informed decision making and minimizes reactive management during project implementation. This is particularly important in food and beverage manufacturing firms where delays or cost overruns directly affect production capacity and competitiveness.

In relation to this study, Planning Theory explains how project planning as a project management technique influences the performance of projects. The theory supports the assumption that structured planning enhances control, reduces implementation risks, and improves overall project outcomes. Therefore, Planning Theory is relevant in explaining the relationship between project planning and project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Contingency Theory

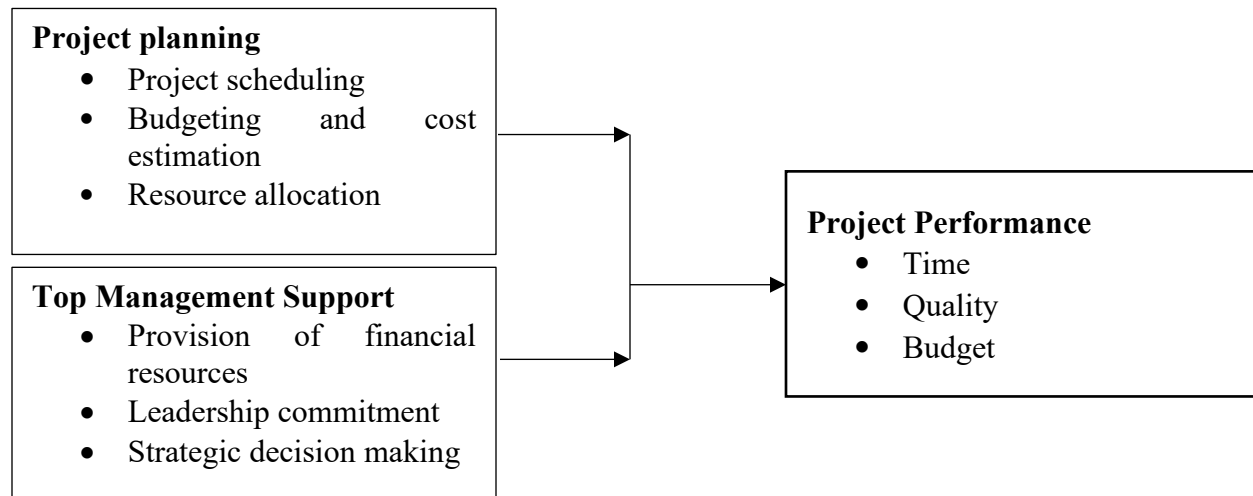
This study is anchored in Contingency Theory, originally advanced by Fred Fiedler, which posits that there is no single best way to manage projects and that managerial effectiveness depends on the alignment between management techniques and situational factors. In contemporary project management, the theory emphasizes that project planning must be adapted to contextual conditions such as project size, environmental uncertainty, technological complexity, organizational capacity, and regulatory demands (Donaldson, 2016). Project planning is therefore viewed as a flexible process rather than a fixed set of procedures.

In projects within food and beverage manufacturing firms, project planning involves defining objectives, scheduling activities, allocating resources, estimating costs, and coordinating stakeholders. According to Contingency Theory, the effectiveness of these planning activities depends on how well they are tailored to the specific conditions facing the project. For instance, firms operating in volatile markets or under strict food safety regulations require more detailed and adaptive planning compared to firms in stable environments (Joslin & Müller, 2015). Failure to align planning approaches with project conditions can lead to delays, cost overruns, and poor implementation outcomes.

Applying Contingency Theory, this study conceptualizes project planning as a situational management technique that must respond to internal and external project demands. Flexible planning allows managers to adjust schedules, budgets, and resource allocation in response to emerging challenges. Empirical evidence suggests that context driven planning improves coordination, enhances decision making, and increases the likelihood of successful project

implementation (Too & Weaver, 2019). Therefore, Contingency Theory provides a suitable framework for explaining how adaptive project planning influences the performance of projects in food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Conceptual Framework



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

Empirical Review

Project planning and Project performance

Project planning is widely recognized as a critical factor influencing the successful execution and performance of projects across various industries. Abdullah, Rahman, and Awang (2020) explored project planning challenges in the oil and gas industry in Malaysia through in-depth interviews with ten professionals. The study found that adequate allocation of resources significantly improves the likelihood of timely project completion. It further identified cost, schedule, and quality as core elements of project planning that determine project outcomes. These findings suggest that structured planning techniques enhance efficiency, reduce delays, and support quality delivery, insights that are highly relevant to manufacturing firms where precise planning is necessary to manage production schedules and resource utilization.

Ogunde, Afolabi, and Ojelabi (2020) conducted a descriptive survey of 59 construction professionals in Nigeria to investigate challenges in project planning systems. Their findings indicated that project location influenced planning decisions and that poor participation by project managers, insufficient client involvement, weak communication, and substandard materials were significant barriers to effective planning. The study underscores the importance of inclusive participation and strong communication channels in project planning, which are equally

crucial for manufacturing projects that require coordination among multiple departments and stakeholders.

Musau and Kirui (2023) examined project planning techniques in government projects in Machakos County using a qualitative survey design with 90 respondents. The study revealed that strategic planning, coupled with monitoring tools, significantly contributed to the successful implementation of projects. This demonstrates that structured planning combined with continuous monitoring enhances project performance, ensuring objectives are met efficiently and within allocated resources.

Omolo (2021) focused on public-funded projects within the Kenya Pipeline Company in Nairobi County and identified leadership and technical capacity as key determinants of project planning success. The study found that poor leadership hindered effective project execution, while skilled staff positively influenced planning outcomes. These findings highlight the critical role of managerial competence and technical expertise in ensuring that project plans are actionable and effectively implemented.

Ocharo and Kimutai (2020) assessed project planning and implementation of power projects in Kenya through an explanatory survey of 380 respondents. The study revealed that although most projects had comprehensive plans, implementation suffered due to limited stakeholder involvement and weak monitoring and evaluation mechanisms. The research emphasized that continuous feedback, stakeholder engagement, and adaptive planning are essential for ensuring that project plans translate into tangible results.

Collectively, these studies highlight that effective project planning involves the careful allocation of resources, active participation of key stakeholders, strong leadership, and robust monitoring and evaluation systems. For food and beverage manufacturing firms, these insights indicate that successful project performance relies not only on detailed planning but also on systematic follow-up, communication, and engagement with all actors involved in the production process. By adopting these planning techniques, manufacturing firms can enhance efficiency, minimize delays, maintain quality standards, and achieve organizational objectives.

Top management support and Project performance

Top management support is a critical determinant of organizational performance, as it shapes strategic direction, ensures resource availability, and influences employee motivation and commitment. Davoine and Ravasi (2020) examined the career trajectories of 911 top managers across 111 European companies and found that while internationalization is gradually influencing management techniques, top management remains central to shaping organizational direction. The study highlights that consistent managerial commitment and stability are essential for guiding strategic initiatives, a principle that extends to project performance improvement in manufacturing firms, where strong leadership can align operations with organizational objectives.

Chinomona, Popoola, and Imuezerua (2020) studied 200 companies in Gauteng Province, South Africa, to investigate how top management commitment, organizational support, ethical climate, and employee empowerment influence job satisfaction. The results indicated that top management commitment had the strongest effect on employee satisfaction, reinforcing the idea that visible managerial support motivates employees, enhances morale, and positively affects overall organizational performance. For food and beverage manufacturing firms, this suggests that when management demonstrates commitment, employees are more likely to engage effectively in production processes and operational tasks, leading to improved project performance outcomes.

Njenga, Kariuki, and Wanjohi (2023) examined the effect of top management support on the project performance of state corporations in Kenya using a descriptive survey of 264 respondents. The study found a positive and significant relationship between management support and project performance, noting that alignment with policy frameworks and consistent managerial involvement were key contributors to organizational success. This demonstrates that when top management provides strategic guidance and ensures resource alignment, it strengthens operational efficiency and goal attainment.

Kemei, Oboko, and Kidombo (2020) explored the moderating role of top management support on project leader competencies and ERP system project performance in Kenya's energy sector. The findings revealed that managerial backing enhanced project leadership capabilities and improved project outcomes, showing that top management support amplifies the effectiveness of operational and technical teams. Applied to food and beverage manufacturing firms, this implies that supportive leadership can reinforce managerial and technical capacities, promoting better productivity and operational project performance.

King'oo (2020) investigated top management support and service delivery in Nairobi City County Government and found that hierarchical structures combined with strong management involvement enhanced decision-making and organizational efficiency. This study underscores the importance of structured managerial engagement in ensuring smooth operations, timely decision-making, and effective coordination factors that are equally relevant to project performance in manufacturing firms, where operational efficiency depends on committed and supportive leadership.

Collectively, these studies demonstrate that top management support positively influences organizational project performance by providing strategic direction, aligning resources, motivating employees, and enhancing operational efficiency. In the context of food and beverage manufacturing firms, managerial commitment is critical for achieving production targets, maintaining quality standards, and fostering an environment where employees and operational teams can perform effectively.

RESEARCH METHODOLOGY

The study used the descriptive research design. This design is pertinent in “developing the profile of a situation and a community of people by getting complete and accurate information through an interaction between the researcher and the respondent via data collection tools” (Kothari & Garg, 2018). This study targeted food and beverage manufacturing firms in Uasin Gishu County, Kenya. KAM Report (2023) indicates a total of 27 food and beverage manufacturing firms in Uasin Gishu County, Kenya. The unit of analysis was therefore the 27 projects while the unit of observation was Project Managers, Engineers, Operations Supervisors, and Project team Members working with food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Table 1: Target Population

Category	Target Population
Project Managers	27
Engineers	27
Operations Supervisors	27
Project team Members	162
Total	243

The study’s sample size was reached at using Krejcie and Morgan sample size determination formula (Russell, 2019). The formula used for arriving at the sample size is;

$$n = \frac{x^2 NP(1 - P)}{(ME^2(N - 1)) + (x^2 P(1 - P))}$$

Where:

n=sample size

x^2 =Chi-square for the specified confidence level at 1 degree of freedom

N=Population size (243)

P = is the proportion in the target population estimated to have characteristics being studied. As the proportion was unknown, 0.5 was used.

Chuan and Penyelidikan (2016) indicate that the use of 0.5 provides the maximum sample size and hence it is the most preferable. $233.377/1.5679$

ME=desired margin of Error (Expressed as a proportion)

$$n = \frac{1.96^2 243 * 0.5 * 0.5}{(0.05^2 * 243) + (1.96^2 * 0.5 * 0.5)}$$

$$n = 149$$

The study collected primary data using questionnaires. The data collected was quantitative in nature. The data for this study was collected using both closed-ended and open-ended questions. Each responder was required to rate each statement supplied describing a specific variable on a scale ranging from 1 to 5. The questionnaire included Likert scale psychometric constructs with a scale ranging from 1 to 5. The scale goes from 5 to 1: strongly agree, agree, neutral, disagree, and strongly disagree.

The questionnaire was pretested to assess its validity and reliability before the main study.. Accordingly, the study was piloted on 15 respondents, representing 10% of the total sample size. Data obtained from the pilot test was analyzed to assess clarity, consistency, and the relevance of each questionnaire item. Items found to be ambiguous, confusing, or irrelevant was revised or removed. The Statistical Package for Social Sciences (SPSS) version 25 software was used to analyze the data. The research used descriptive analysis. This study conducted inferential statistics through correlation analysis and regression analysis. A multiple regression model was used to test the significance of the influence of the independent variables on the dependent variable. The multiple regression equation model is illustrated below: -

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

Y is the dependent variable (project implementation in manufacturing firms in Uasin Gishu County, Kenya),

β_0 is the constant (Co-efficient of intercept)

β_1 , and β_2 are the slopes of the regression equation,

X_1 is project planning

X_2 is top management support,

e is an error term

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Statistics Analysis

Project Planning and Project Performance

The first specific objective of the study was to examine the influence of project planning on the project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. The respondents were requested to indicate their level of agreement on statements relating to

project planning and project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. The results were as presented in Table 3.

From the results, the respondents agreed that the organization develops a clear project schedule before implementation begins ($M=3.932$, $SD=0.850$). In addition, the respondents agreed that delays in project timelines are promptly identified and addressed ($M=3.923$, $SD=0.798$). Further, the respondents agreed that the organization prepares a detailed project budget before implementation ($M=3.884$, $SD=0.610$).

From the results, the respondents agreed that cost estimates are based on accurate and current financial information ($M=3.779$, $SD=0.646$). In addition, the respondents agreed that project expenditures are compared against the planned budget throughout implementation ($M=3.776$, $SD=0.768$). Further, the respondents agreed that required project resources are identified before project implementation ($M=3.762$, $SD=0.751$).

Table 3: Project Planning and Project Performance

	Mean	Std. Deviation
The organization develops a clear project schedule before implementation begins.	3.932	0.850
Delays in project timelines are promptly identified and addressed.	3.923	0.798
The organization prepares a detailed project budget before implementation	3.884	0.610
Cost estimates are based on accurate and current financial information.	3.779	0.646
Project expenditures are compared against the planned budget throughout implementation.	3.776	0.768
Required project resources are identified before project implementation.	3.762	0.751
Aggregate	3.843	0.737

Top Management Support and Project Performance

The second specific objective of the study was to determine the impact of top management support on the project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. The respondents were requested to indicate their level of agreement on the statements relating to top management support and project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. The results were as shown in Table 4

From the results, the respondents agreed that top management demonstrates clear commitment to project implementation ($M=3.877$, $SD=0.872$). In addition, the respondents agreed that top management visibly supports project teams during implementation ($M=3.859$, $SD=0.706$). Further, the respondents agreed that senior management actively participates in key project decisions ($M=3.818$, $SD=0.738$).

From the results, the respondents agreed that top management ensures availability of necessary financial resources ($M=3.791$, $SD=0.616$). In addition, the respondents agreed that management

allocates adequate human resources to project activities ($M=3.711$, $SD=0.650$). Further, the respondents agreed that top management intervenes to resolve resource constraints when they arise ($M=3.703$, $SD=0.716$).

Table 4: Top Management Support and Project Performance

	Mean	Std. Deviation
Top management demonstrates clear commitment to project implementation	3.877	0.872
Top management visibly supports project teams during implementation.	3.859	0.706
Senior management actively participates in key project decisions.	3.818	0.738
Top management ensures availability of necessary financial resources.	3.791	0.616
Management allocates adequate human resources to project activities.	3.711	0.650
Top management intervenes to resolve resource constraints when they arise.	3.703	0.716
Aggregate	3.793	0.716

Inferential Statistics

Inferential statistics in the current study focused on correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship while regression analysis was used to determine the relationship between dependent variable (project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya) and independent variables (project planning and top management support).

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (project planning and top management support) and the dependent variable (project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya) dependent variable. Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 5: Correlation Coefficients

		Project Performance	Project Planning	Top Management Support
Project Performance	Pearson	1		
	Correlation			
	Sig. (2-tailed)			
Project Planning	N	131		
	Pearson	.887**	1	
	Correlation			
Top Management Support	Sig. (2-tailed)	.000		
	N	131	131	
	Pearson	.871**	.379	1
	Correlation			
	Sig. (2-tailed)	.001	.071	
	N	131	131	131

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

From the results, there was a very strong relationship between project planning and project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya ($r = 0.887$, p value $=0.000$). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the findings of Rahman, and Awang (2020) who indicated that there is a very strong relationship between project planning and project performance.

Moreover, the results revealed that there is a very strong relationship between top management support and project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya ($r = 0.871$, p value $=0.001$). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings conform to the findings of Davoine and Ravasi (2020) that there is a very strong relationship between top management support and project performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (project planning and top management support) and the dependent variable (project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya)

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833	.694	.693	.10129

a. Predictors: (Constant), project planning and top management support

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r -squared for the relationship between the independent variables and the dependent variable was 0.694 . This implied that 69.4% of the

variation in the dependent variable (project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya) could be explained by independent variables (project planning and top management support).

Table 7: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	79.163	2	39.582	145.522	.000 ^b
Residual	34.846	128	.272		
Total	114.009	130			

a. Dependent Variable: project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya

b. Predictors: (Constant), project planning and top management support

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 145.522 while the F critical was 3.067. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of project planning and top management support on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Table 8: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
1	(Constant)	0.227	0.061		3.721	0.000
	project planning	0.389	0.101	0.388	3.851	0.000
	top management support	0.375	0.097	0.376	3.866	0.001

a Dependent Variable: project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya

The regression model was as follows:

$$Y = 0.227 + 0.389X_1 + 0.375X_2 + \varepsilon$$

According to the results, project planning has a significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya ($\beta_1=0.389$, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Rahman, and Awang (2020) who indicated that there is a very strong relationship between project planning and project performance.

The results also revealed that top management support has significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya, ($\beta_1=0.375$, p value= 0.001). The relationship was considered significant since the p value 0.001

was less than the significant level of 0.05. The findings conform to the findings of Davoine and Ravasi (2020) that there is a very strong relationship between top management support and project performance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that project planning has a positive and significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. Findings revealed that project scheduling, budgeting and cost estimation and resource allocation influences project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. In addition, the study concludes that top management support has a positive and significant effect on project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya. Findings revealed that provision of financial resources, leadership commitment and strategic decision-making influences project performance of food and beverage manufacturing firms in Uasin Gishu County, Kenya.

Recommendations

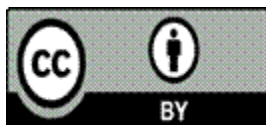
The study recommends that the management of food and beverage manufacturing firms in Kenya should strengthen project planning by adopting structured and data-driven planning frameworks that clearly define project scope, timelines, resource allocation, and risk mitigation strategies before implementation. In addition, the study recommends that the management of food and beverage manufacturing firms in Kenya should strengthen top management support by ensuring that senior executives are actively involved in project oversight through consistent resource allocation, strategic guidance, and timely decision-making. This includes committing adequate financial and human resources, setting clear performance expectations, and regularly reviewing project progress to address emerging challenges.

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