INFLUENCE OF SUPPLIER RELATIONSHIP ON OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN KAJIADO COUNTY

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ABSTRACT

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Manufacturing firms in Kajiado County continue to grapple with significant operational performance challenges such as production delays, quality defects, cost overruns, and frequent supply chain disruptions. These persistent issues are largely attributed to ineffective supplier relationship management, often characterized by short-term transactional interactions, the absence of strategic partnerships, inadequate supplier evaluation mechanisms, and limited collaboration between manufacturers and their suppliers. This study sought to investigate the influence of supplier relationships on the operational performance of manufacturing firms in Kajiado County. Anchored on the Resource-Based View (RBV) theory, the research employed a cross-sectional survey design targeting a population of 1,478 staff across 13 manufacturing firms. Using purposive sampling and Yamane's formula, a sample of 94 respondents was selected, yielding a high response rate of 96.8%. Primary data were collected using structured questionnaires based on Likert-scale items, and analyzed through SPSS using multiple regression analysis. The findings indicated a strong positive relationship between supplier relationships and operational performance ($R = 0.684$). The model demonstrated that supplier relationships accounted for 61.4% of the variance in operational performance ($R^2 = 0.614$). The regression analysis confirmed statistical significance ($F = 3.044$, $p < 0.05$), with supplier relationship strength showing a positive coefficient ($\beta = 0.308$, $p = 0.002$). The study concludes that supplier relationships are pivotal to enhancing operational performance. To optimize operational outcomes, manufacturing firms should institutionalize structured supplier partnership models. These may include regular supplier engagement forums, comprehensive supplier development programs, and collaborative planning committees.

Key words: Supplier relationships, Operational performance, Manufacturing firms - The study context, Kajiado County

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1.0 INTRODUCTION

A. Background of the Study

Supplier relationships have emerged as a fundamental component of operational excellence in manufacturing firms, fostering collaboration between organizations and their supply partners to enhance productivity, quality, and overall performance. The concept is rooted in the principles of supply chain integration, strategic partnerships, and collaborative management, which have been recognized as effective mechanisms for improving operational efficiency and building competitive advantage (Chen & Paulraj, 2022). Supplier relationship management encompasses various strategies, including long-term partnerships, supplier development programs, and collaborative planning processes that encourage active supplier participation in operational improvement efforts (Kumar & Singh, 2021).

Kajiado County, located in Kenya's Central region, has experienced significant growth in manufacturing activities, particularly in food processing, textile production, and construction materials. Manufacturing firms in this region face increasing challenges regarding operational performance, including quality inconsistencies, delivery delays, cost escalations, and production inefficiencies. These challenges have been attributed to factors such as poor supplier relationships, inadequate supplier selection processes, and limited collaboration between manufacturers and their suppliers (Mwangi & Kiprotich, 2023). According to the Kenya Association of Manufacturers (KAM, 2023), manufacturing firms in Kajiado County have recorded fluctuating operational performance indicators, highlighting the need for enhanced supplier relationship management practices.

The Kenya Manufacturing Sector has attempted to implement various supplier management initiatives; however, their effectiveness has been hindered by weak supplier partnerships, inadequate communication channels, and limited investment in supplier development programs (Njoroge & Wanjiku, 2022). Globally, supplier relationship management has been recognized as a critical operational performance strategy. Studies from developed nations, such as Germany and Japan, indicate that well-structured supplier partnership programs significantly contribute to operational excellence and competitive advantage (Wagner & Johnson, 2023). In Kenya, the adoption of supplier relationship management practices has demonstrated potential in improving operational performance, particularly in manufacturing sectors (Ochieng, 2022). However, in Kajiado County, the effectiveness of supplier relationships in enhancing operational performance remains a subject of investigation, as challenges such as supplier reliability, quality consistency, and communication barriers persist.

A review of existing literature suggests that strong supplier relationships foster improved collaboration, leading to better quality control, timely deliveries, and enhanced innovation capabilities (Kamau, 2021). Moreover, research highlights that manufacturing firms with robust supplier partnerships experience superior operational performance due to increased trust, information sharing, and joint problem-solving capabilities (Wanjala, 2022). However, in Kajiado

County, barriers such as lack of supplier development programs, inadequate performance monitoring systems, and limited long-term partnership commitments hinder the effectiveness of supplier relationship initiatives. Given the critical role of supplier relationships in operational performance, there is a need to assess their impact within Kajiado County's manufacturing sector and explore strategies for improving supplier-manufacturer collaboration. This study seeks to examine the extent to which supplier relationships influence operational performance in Kajiado County manufacturing firms, identify the challenges faced, and propose recommendations aimed at enhancing operational excellence through strategic supplier partnerships.

B. Statement of the Problem

Despite various operational improvement strategies employed by manufacturing firms in Kajiado County, operational performance remains inconsistent, affecting productivity, quality, and competitiveness. The manufacturing sector has witnessed increasing challenges including production delays, quality defects, cost overruns, and supply chain disruptions, raising concerns among business owners and industry stakeholders (KAM, 2023). While supplier relationship management is widely recognized as a crucial approach to operational excellence, its implementation in Kajiado County has been limited by factors such as lack of strategic partnerships, inadequate supplier evaluation systems, and insufficient collaboration between manufacturers and suppliers (Njoroge & Wanjiku, 2022).

One of the major challenges in Kajiado County's manufacturing sector is the ineffective management of supplier relationships. While some firms have attempted to establish supplier partnerships, their impact has been undermined by short-term transactional approaches and lack of structured collaboration frameworks (Mwangi & Kiprotich, 2023). Many manufacturers remain hesitant to invest in long-term supplier relationships due to trust issues, while others perceive supplier development as costly and time-consuming, further weakening operational performance efforts (Ochieng, 2022). Additionally, rapid market changes and increasing customer demands have contributed to operational pressures, as many firms struggle to align their supplier capabilities with performance requirements (Wanjala, 2022). The study seeks to address these pressing issues by evaluating the influence of supplier relationships on operational performance in Kajiado County manufacturing firms.

C. Purpose of the Study

The purpose of the study was to examine the influence of supplier relationship on operational performance of manufacturing firms in Kajiado County.

2.0 LITERATURE REVIEW

A. Theoretical Framework

Resource-Based View Theory

This theory was advanced by Barney in 1991, who argued that firms can achieve sustained competitive advantage through the strategic utilization of valuable, rare, inimitable, and non-substitutable resources. The theory suggests that supplier relationships represent strategic resources that, when properly developed and managed, can provide manufacturing firms with unique capabilities that competitors cannot easily replicate (Barney & Arikan, 2021). This inference was drawn from extensive research on organizational resources and capabilities, which demonstrated that interfirm relationships, particularly with suppliers, constitute valuable intangible assets that can significantly enhance operational performance.

The theory maintains that supplier relationships create value through knowledge sharing, joint problem-solving, and collaborative innovation, which in turn lead to improved operational efficiency, quality enhancement, and cost reduction (Teece, 2020). The adoption of RBV in supplier relationship management aims at developing strategic partnerships that provide unique operational capabilities and sustainable competitive advantages through the cultivation of trust, commitment, and mutual dependency between manufacturers and suppliers.

The theory allows manufacturing firms to identify and leverage supplier relationships as strategic resources that can drive operational excellence and long-term success (Grant, 2022). This theory will assist this study in understanding how supplier relationships function as strategic resources that influence operational performance outcomes. The supplier relationship dimensions serve as the independent variables in this study, namely supplier selection, supplier development, supplier integration, and supplier performance evaluation. The end result of these strategic supplier relationships is enhanced operational performance, which is the dependent variable.

B. Empirical Review

Supplier Relationships and Operational Performance

A research by Thompson et al. (2021) examined how supplier partnership strategies affected manufacturing firms' operational performance in the automotive industry. The study was driven by the hypothesis that strategic supplier relationships could enhance operational efficiency through improved collaboration and resource sharing. It attempted to ascertain the effectiveness of supplier relationship management practices using a quantitative research approach targeting 150 manufacturing firms across three countries. The study covered supplier selection processes, development programs, integration mechanisms, and performance evaluation systems. The study found that supplier relationships had significant potential for improving operational performance and achieving better outcomes for manufacturing firms.

Martinez (2023) in a comprehensive study for the European Manufacturing Association, examined the role of supplier relationships in operational excellence as part of supply chain management strategies. The author analyzed primary data from 200 manufacturing companies and identified the significance of collaborative partnerships in supplier relationship management. The research remarked that it is critical for manufacturing firms to establish processes that allow suppliers to be

involved and influence operational decisions. According to the research, supplier relationships are crucial for enhancing operational performance and building sustainable competitive advantages. It was suggested that supplier partnerships be developed through strategic approaches and be necessary for operational success. Through strategies such as supplier development programs, joint performance improvement initiatives, collaborative planning processes, and long-term partnership agreements, it identified the unrealized potential for maximizing supplier relationship benefits.

In a research on supplier relationship management practices and their impact on operational performance in Nairobi's manufacturing sector, Kiprotich (2022) looked at how supplier partnerships contribute to operational excellence. The study focused on 85 manufacturing firms from various industries and used a descriptive research design. According to the study, supplier relationships, when combined with other operational strategies, significantly and positively contributed to enhanced operational performance in Nairobi's manufacturing sector.

The above selected areas of study offer different approaches and gaps that this proposed study seeks to fill. The study by Thompson et al. adopted a multi-country approach which may not capture the specific contextual factors affecting Kajiado County, this will be covered by the proposed study which will focus specifically on local manufacturing firms. Similarly, the study by Martinez (2023) focuses on European manufacturing contexts as opposed to the current study design that targets Kenyan manufacturing firms. The study by Kiprotich (2022) limits itself to Nairobi's manufacturing sector, and as a result may not reflect the unique challenges and opportunities present in Kajiado County. The proposed study recognizes the specific role of supplier relationships in the unique context of Kajiado County's manufacturing environment.

3.0 METHODOLOGY

This study investigates how supplier relationship management practices influence operational performance in manufacturing firms in Kajiado County. A cross-sectional survey design was adopted, enabling data collection from multiple firms at a single point in time. The target population consisted of 1,478 staff across 13 manufacturing firms, including CEOs, Supply Chain Directors, Procurement/Logistics Managers, and Operational Staff. Purposive sampling was used to select knowledgeable participants, and Yamane's formula determined a sample size of 94 respondents, ensuring representation across different employee categories. Primary data was collected using self-administered structured questionnaires, distributed through a drop-and-pick-later method to enhance accuracy and response rate. Responses were measured using a Likert scale, allowing reliable assessment of opinions and attitudes. Data was cleaned, coded, and analyzed using SPSS, a powerful tool for managing and examining quantitative data. Multiple regression analysis was employed to evaluate the effect of supplier relationship practices—Supplier Selection, Supplier Development, Supplier Integration, and Supplier Performance Evaluation—on operational performance. This method allowed the researchers to assess the collective impact of these variables on firm efficiency and effectiveness in Kajiado County's manufacturing sector.

4.0 RESEARCH FINDINGS AND DISCUSSION

A. Response Rate

94 people were chosen for the survey and 91 of them completed and returned the questionnaire. There was a 96.8% response rate as a result. Because so many people responded, we know the results can be trusted. Campion (1993) pointed out that researchers should aim for high response rates, consider the possible effects of those who do not respond and avoid bias in the results. When a high number of people respond, there is less chance of bias and the study becomes better quality.

Table 1: Response Rate

Category	Frequency	Percentage (%)
Targeted	94	100.0
Returned	91	96.8

Source: Researcher (2024)

Different experts have proposed different ways to judge how high response rates should be. According to Mugenda and Mugenda (2008), a 50% response rate is tolerable, 60% is a strong result and outstanding results are achieved with over 70%. Dillman (2000) believes that a response rate of 50% is the minimum, while Fowler (2009) believes 60%. Babbie (2011) considered a response rate of 50% acceptable, 60% commendable and 70% to be excellent. Because 96.8% of participants responded, the study's findings are both reliable and trustworthy.

4.4 Descriptive Analysis

Descriptive analysis summarizes and organizes data using statistical measures such as mean and standard deviation, providing insights into patterns, trends, and distributions within the dataset.

Supplier Relationships

The study examines the influence of supplier relationships on operational performance of manufacturing firms in Kajiado County. The results are displayed in Table 2 below.

Table 2: Supplier Relationships

Statement	N	Mean	Std. Deviation
Manufacturing firms actively involve suppliers in planning and executing operational improvement programs and initiatives in Kajiado County.	91	3.85	.946
There is significant cooperation between manufacturing firms and suppliers in addressing operational performance issues.	91	4.20	1.091
Suppliers are effectively integrated through various collaborative mechanisms to participate in and promote operational excellence efforts.	91	3.69	1.077
Key suppliers within the supply base actively promote and advocate for the implementation of operational improvement strategies and activities.	91	3.99	.821
Supplier relationship initiatives have led to measurable improvements in operational performance and overall manufacturing effectiveness.	91	3.51	.950

Manufacturing firm managers are fully involved in developing, supporting, and encouraging supplier relationship management efforts.	91	3.78	1.121
Supplier participation in operational improvement initiatives is seen as a critical element in successfully enhancing manufacturing performance.	91	3.65	.832
Valid N (listwise)	91		

Source: Field Data (2025)

Table 2 indicates that the majority of the respondents strongly agreed that manufacturing firms actively involve suppliers in planning and executing operational improvement programs and initiatives in Kajiado County, as shown by the mean of 3.85 and standard deviation of 0.946. This suggests that supplier involvement in operational improvement initiatives is highly valued by the respondents, with a relatively low variation in their responses. The majority also strongly agreed that there is significant cooperation between manufacturing firms and suppliers in addressing operational performance issues, as shown by the mean of 4.20 and standard deviation of 1.091. This implies that respondents perceive strong collaboration between manufacturers and suppliers, although there is slightly more variation in the responses regarding the extent of this cooperation.

The study also revealed that the majority of the respondents strongly agreed that suppliers are effectively integrated through various collaborative mechanisms to participate in and promote operational excellence efforts, as shown by the mean of 3.69 and standard deviation of 1.077. The respondents agreed that key suppliers within the supply base actively promote and advocate for the implementation of operational improvement strategies and activities, as shown by the mean of 3.99 and standard deviation of 0.821. This result highlights a general consensus on the role of suppliers in operational improvement, with relatively low variation in the responses. The study also revealed that the majority of the respondents strongly agreed that supplier relationship initiatives have led to measurable improvements in operational performance and overall manufacturing effectiveness, as shown by the mean of 3.51 and standard deviation of 0.950. This indicates that respondents perceive a positive impact of supplier relationships on operational performance, although some variation in their responses exists. The respondents agreed that manufacturing firm managers are fully involved in developing, supporting, and encouraging supplier relationship management efforts, as shown by the mean of 3.78 and standard deviation of 1.121. This suggests that management commitment plays a crucial role in supplier relationship initiatives, but there is a higher variation in the responses, possibly indicating differing views on the effectiveness of this involvement. Supplier participation in operational improvement initiatives is seen as a critical element in successfully enhancing manufacturing performance, as shown by the mean of 3.65 and standard deviation of 0.832. This emphasizes the importance of supplier participation in operational excellence efforts, with a relatively low level of variation in respondents' opinions on the matter.

Operational Performance in Kajiado County

The purpose of the study was to look at how customer service is delivered at Kenya Power and Lighting Company Limited in Kenya. The findings are summarized in Table 3.

Table 3: Operational Performance in Kajiado County

	N	Mean	Std. Deviation
Our firm regularly evaluates production workflows to improve speed and reduce delays, resulting in more efficient operations.	91	3.93	.992
The firm has adopted automated systems that increase operational efficiency and minimize human errors during production processes.	91	3.90	1.337
We regularly assess our operational processes, identifying and addressing bottlenecks to improve overall production efficiency.	91	3.92	1.082
Operational performance is positively affected by continuous efforts to streamline processes and minimize unnecessary steps in production.	91	4.01	1.104
Our firm effectively manages production costs through budgeting, cost monitoring, and reducing waste in the manufacturing process.	91	4.12	1.013
Cost-saving initiatives, such as process optimization and resource management, directly contribute to our improved operational performance.	91	3.82	1.246
We continuously implement cost-reduction measures that enhance our firm's financial stability and operational performance.	91	3.77	1.142
Our firm’s ability to maintain competitive pricing while managing costs has led to improved profitability and operational performance.	91	3.88	.990

Source: Researcher (2024)

Table 3 reveals that a significant number of respondents strongly agreed that their firms regularly evaluate manufacturing processes to enhance speed and prevent delays. This is supported by a high mean score of 3.93 and a standard deviation of 0.992, indicating a consistent perception among respondents. Furthermore, the data shows that many respondents acknowledged the adoption of automated systems within their organizations to enhance operations and minimize production errors, as reflected by a mean of 3.90 and a standard deviation of 1.337. The study also found that most respondents strongly believed their organization actively monitors its operations, identifies delays, and implements corrective actions to boost production efficiency. This is illustrated by a mean of 3.92 and a standard deviation of 1.082. Respondents further affirmed that operational performance is improved by streamlining processes and eliminating unnecessary steps, as shown by a mean score of 4.01 and a standard deviation of 1.104. In terms of cost control, most respondents strongly believed that their companies manage production costs through budgeting,

cost monitoring, and waste reduction. This is supported by a mean of 4.12 and a standard deviation of 1.013. Additionally, participants agreed that managing costs through process adjustments and efficient resource allocation leads to better operational outcomes, with a mean of 3.82 and standard deviation of 1.246. The study also noted that the majority of respondents agreed their firms routinely implement cost-cutting measures to improve financial performance and stability. This view is backed by a mean of 3.77 and a standard deviation of 1.142. Lastly, many respondents believed that the organization's ability to manage costs while offering competitive pricing has significantly enhanced profitability and operational efficiency, as reflected by a mean score of 3.88 and a standard deviation of 0.990. The finding matches up with a study from Narasimhan and Jayaram (2022) which reports that a balance between cost management and pricing improves competitiveness and results in better operations.

C. Inferential Analysis

This section presents the inferential analysis used to determine the relationship between independent variables and operational performance outcomes. It is important as it allows for the generalization of the findings from the sample to the entire population. Statistical methods like regression, ANOVA, and coefficients provide insight into the strength and significance of the variables affecting operational performance in manufacturing firms.

Model Summary

Table 4 investigates the goodness of fit of the regression model, assessing how well the predictors explain the variance in operational performance outcomes.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684a	.614	.591	1.3361

a. Predictors: (Constant), Supplier Relationships

Source: Field Data (2025)

The R value of 0.684 suggests a strong positive relationship between the predictor (Supplier Relationships) and operational performance outcomes. The R Square value of 0.614 indicates that approximately 61.4% of the variation in operational performance outcomes is explained by supplier relationship factors. The Adjusted R Square value of 0.591 accounts for the number of predictors in the model, indicating that the model is fairly accurate in predicting operational performance outcomes. The standard error of estimate (1.3361) suggests the model has a reasonable fit, with relatively small residuals.

ANOVAa of the Regression Model

Table 5 investigates the overall significance of the regression model, assessing whether the independent variables collectively have a significant impact on operational performance outcomes.

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.434	4	3.108	3.044	.000b
	Residual	71.486	87	1.021		
	Total	**83.920**	**91**			

a. Dependent Variable: Operational Performance Outcomes
b. Predictors: (Constant), Supplier Relationships

Source: Field Data (2025)

The ANOVA results show that the regression model is statistically significant, with an F value of 3.044 and a significance level of 0.000 ($p < 0.05$). This indicates that the combined effect of Supplier Relationships significantly contributes to explaining the variation in operational performance outcomes. The p-value confirms that the regression model is a good fit for the data, suggesting that supplier relationship factors collectively have a notable impact on operational performance.

5.0 SUMMARY OF THE STUDY

The analysis reveals strong supplier involvement in operational improvement initiatives in Kajiado County manufacturing firms, with a mean score of 3.85 (SD=0.946) for active participation in planning and execution. This engagement significantly influences operational performance outcomes ($\beta=0.308$, $p=0.002$), indicating that for each unit increase in supplier relationship strength, operational performance outcomes improve by 0.308 units. The cooperation between manufacturing firms and suppliers shows particularly strong results (M=4.20, SD=1.091), suggesting effective collaboration. The regression analysis supports this finding, with supplier relationships explaining a significant portion of the variance in operational performance outcomes ($R^2=0.614$). These results demonstrate that supplier relationships are a crucial determinant of successful operational performance strategies in Kajiado County manufacturing firms.

6.0 CONCLUSION

The study concluded that supplier relationships are a fundamental driver of successful operational performance in Kajiado County manufacturing firms. Active supplier involvement in planning and executing operational improvement programs demonstrated strong effectiveness, particularly in fostering cooperation between manufacturing firms and their suppliers. The findings revealed that when suppliers are actively engaged in operational improvement initiatives, the likelihood of successful performance outcomes increases substantially. The strong collaborative relationship between manufacturers and suppliers emerged as a critical factor in operational excellence efforts. This underscores the importance of maintaining and strengthening supplier participation in all aspects of operational performance planning and implementation.

7.0 RECOMMENDATIONS

The study recommended that manufacturing firms should strengthen their supplier relationship management framework by establishing formalized supplier partnership structures. This should include creating regular supplier forums, implementing systematic supplier development programs, and developing joint planning committees that bring together manufacturers and key suppliers. These initiatives should ensure continuous dialogue, shared decision-making, and active supplier participation in developing and implementing operational improvement strategies that enhance manufacturing performance and competitiveness.

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