

STRATEGIC PROCUREMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE OF MILK PROCESSING FIRMS IN KIAMBU COUNTY, KENYA

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ABSTRACT

The milk processing industry plays a significant role in agricultural output and supports the livelihoods of millions of people through agro-based activities. However, milk processing firms in Kiambu County have experienced a notable decline in performance over the past five years, with profit margins dropping from 15% in 2020 to 8% in 2024, and market share declining from 25% to 18% over the same period. Against this backdrop, this study examined the effect of strategic procurement practices specifically supplier collaboration, supplier evaluation, supplier diversification, and supplier development programs on the performance of milk processing firms in Kiambu County, Kenya. Anchored on the Resource-Based View (RBV) Theory, Stakeholder Theory, and Supply Chain Management (SCM) Theory, the study adopted a descriptive research design. The target population comprised all 17 registered milk processing firms, with 102 respondents including senior managers, procurement officers, and operational staff. A census sampling approach was employed. Primary data were collected through structured self-administered questionnaires using a drop-and-pick method, while secondary data were sourced from organizational documents and relevant

journals. A pilot study conducted in Murang'a County confirmed instrument validity and reliability. Data were analyzed using Pearson correlation and multiple linear regression via SPSS Version 27. Results revealed a significant positive multiple correlation ($R = 0.843$) and that the four procurement practice dimensions collectively explained 71.1% ($R^2 = 0.711$) of the variance in organizational performance. Supplier development programs emerged as the strongest predictor ($\beta = 0.263$, $p < 0.001$), followed by supplier collaboration ($\beta = 0.248$, $p < 0.001$), supplier evaluation ($\beta = 0.236$, $p < 0.001$), and supplier diversification ($\beta = 0.194$, $p < 0.001$). The study concludes that strategic procurement practices are essential drivers of organizational performance in the dairy processing sector. It recommends that managers invest in structured supplier development programs, formalize supplier evaluation frameworks, pursue deliberate supplier diversification, and build collaborative supplier platforms.

Key words: Strategic Procurement, Supplier Collaboration, Supplier Evaluation, Supplier Diversification, Supplier Development Programs, Organizational Performance, Milk Processing Firms.

INTRODUCTION

The performance of milk processing firms has become a critical concern globally, as these firms play indispensable roles in food security, rural livelihoods, and economic growth (Stevens & Johnson, 2021). In Kenya, the dairy sector contributes approximately 14% of agricultural GDP and sustains more than 1.8 million livelihoods, with Kiambu County ranking among the nation's leading milk-producing regions (Kenya Dairy Board, 2022). Kiambu County hosts 17 licensed dairy processing companies and contributes about 30% of Kenya's total annual milk output (Kiambu County Dairy Development Programme, 2022). Despite this strategic importance, dairy processing firms in the county have recorded worrying performance trends, with average Return on Assets (ROA) declining from 8% in 2018 to approximately 4% in 2022, primarily due to rising operational costs, procurement inefficiencies, and inconsistent raw milk quality (Mugwe, Karanja & Kihoro, 2021).

Strategic procurement practices have been widely acknowledged as systematic, value-oriented approaches that align sourcing activities with organizational strategic objectives (Choi & Wu, 2020). However, despite substantial evidence of their importance in manufacturing and service sectors globally, empirical research specifically examining their effect on milk processing firms in Kiambu County remains limited (Ochieng & Muli, 2021). A study by Chege and Muturi (2019) established that 65% of milk processors in Kiambu County cited supplier reliability as a key source of substandard products and customer complaints, pointing to significant gaps in procurement strategy. A survey by Wambugu, Muchiri, and Kioko (2021) disclosed that only 43% of the processors in Kiambu attained their projected annual profits, whilst their average profit margin was merely 8% compared to the usual 15%. The performance problems have been attributed to poor planning in procurement and supplier assessments. The research found out that 65% of the firms did not have well-organized procurement planning procedures and supplier evaluation tools, which resulted in the operating inefficiencies. The planning and evaluation weaknesses in procurement corresponded to a possible decline in performance of around 30%. The above-mentioned issues indicate a great gap in the comprehension of the effect of strategic procurement practices on firm performance in the Kenyan county and moreover, point out that a better process is needed to improve operational efficiency and profit margins.

Statement of the Problem

The dairy sector is an important part of the economy in Kenya as it contributes nearly 4% of the national GDP. In particular, milk processing companies in Kiambu County are an integral part of the dairy sector, benefitting from the area's favorable climate as well as proximity to important markets. However, urban companies are seeing declining performance across the industry. From 2015 to 2020, the annual turnover of milk processing companies increased by 10.83%, but their profitability declined by 7% due to increasing operational inefficiencies and rising costs (Ombui & Karanja, 2020).

Strategic sourcing practices are generally regarded as the systematic and strategic means of acquiring goods and services, and even being the best in their co-usage they have been recognized to play a vital role in enhancing the operational efficiency and competitive advantage of businesses in various sectors (Mokaya, Ochieng & Muli, 2020). However, despite their critical role, there are still many things that are not clear about the performance of milk processing companies in Kiambu County regarding the influence of strategic sourcing practices. The specific challenges and opportunities related to this sector of the dairy industry in Kiambu County have not been considered in previous studies that focused on more general sourcing strategies (Ochieng & Muli, 2021).

Empirical evidence at present demonstrates a strong link between strategic procurement methods and the performance of organizations in numerous industries. For example, Barasa, Kamau, and Ndiritu (2022) argue that the right procurement strategies can lead to both the saving of costs and the enhancement of quality. According to Chege and Muturi (2019) in their study of the dairy sector, 65% of the milk processors located in Kiambu county pointed out the issue of reliability of suppliers as being responsible for the production of substandard dairy products and the receiving of customer complaints. So, this research aimed to investigate how strategic procurement practices affected the performance of milk processing firms in Kiambu County.

Research Objectives

The general objective was to determine the effect of strategic procurement practices on the performance of milk processing firms in Kiambu County, Kenya. The specific objectives were:

- i. To determine the effect of supplier collaboration on the performance of milk processing firms in Kiambu County.
- ii. To establish the effect of supplier evaluation on the performance of milk processing firms in Kiambu County.
- iii. To assess the effect of supplier diversification on the performance of milk processing firms in Kiambu County.
- iv. To analyze the effect of supplier development programs on the performance of milk processing firms in Kiambu County.

LITERATURE REVIEW

Theoretical Framework

Resource-Based View Theory

The resource-based view which Penrose introduced in 1959 and expanded by Barney in 1991, states that companies can obtain lasting competitive advantages through effective management of their internal resources. The theory postulates that company achieves competitive advantage by managing resources which possess value and scarcity while being difficult to replicate and not easily replaced (Barney 1991). The theory demonstrates that a firm's unique characteristics drive

both its superior performance and its ability to maintain a sustained competitive advantage (Zaridis & Kourentzes 2021). These resources generally fall into four categories: relationship-based resources, organizational skills, people resources, and tangible assets. Physical resources allude to tangible assets like equipment and technologies, which can be used to produce milk for processing in Kenya. Human resources allude to the employees' knowledge, skills, and experience engaged in the firm's procurement and production activities.

In the milk industry, organizations that form exclusive contracts with high-quality milk suppliers have a special resource that cannot be easily replicated by their competitors. Using proprietary procurement software for procurement specific to the firm adds to the competitive advantage that is not easily copied (Teece, 2017). The procurement strategies that might be conceived as part of an RBV framework create efficiencies, cost savings, and quality that improve the firm's competitive position in the milieu.

The theory demonstrates how procurement works as a key resource for milk processing firms in Kiambu County. The milk processing firms can get a competitive advantage that increases efficiencies and performance through strategic procurement of quality milk and raw materials, supplier relationships, and innovation in procurement models / Mutual Nature of procurement relationships (Mokaya, Ochieng, & Amimo, 2020). It was further determined that understanding suppliers as unique or engaging in long-term supplier relationships were useful relational resources for firm performance. Supplier diversification aligns with the RBV by stressing the necessity of having many sources of this resource to lessen dependency and risk, and to build up the firm in terms of resources.

Stakeholders Theory

The Stakeholders Theory was developed by R. Edward Freeman in 1984. The theory notes that businesses should consider the influence and interests of all parties involved in the company rather than only concentrating on increasing shareholder wealth (Freeman, 1984). The theory defines who the stakeholders are, what interests and influences they hold, and how to manage relationships with them in a way that satisfactorily balances the needs and expectations of competing stakeholders (Musonye & Machoka, 2024). According to Wanja & Achuora (2020), stakeholders are categorized into primary stakeholders-those with a direct interest in a company, for instance, employees, customers, and suppliers-and secondary stakeholders-those who are indirectly affected, for example, neighboring communities or the government.

Stakeholder theory provides a useful approach to the procurement processes' effect on stakeholders. For instance, if firms enter into cooperation with suppliers to ensure quality raw materials, there can be an enhancement of product quality that ultimately benefits consumers and their trust in the brand. If employees are involved in procurement decisions, their morale and productivity go up because they feel that their opinions are valued (Omondi & Karanja, 2021).

Strategic procurement entails the management of relationships with suppliers, understanding customer needs, and dealing with approval bodies, all of which form a stakeholder group in and of themselves. This theory provides an understanding of the variables associated with supplier collaboration and supplier evaluation because both involve working with outside organizations that are considered stakeholders of the firm in their supply chain. Supplier collaboration being effective represents the firm's acknowledgment of suppliers as key stakeholders, which can lead to improved performance results. Similarly, supplier evaluation represents process of testing and ranking stakeholder contributions and ensuring those stakeholders are aligned with the firm's strategic priorities.

Supply Chain Management (SCM) Theory

The theory was created by Oliver and Webber in 1982. They argue that the network participants in the supply chain (suppliers, producers, retailers, etc.) have to work together to gain a competitive edge and increase inclusive performance. In the Theory of Supply Chain Management, the primary components are planning the supply chain, sourcing, production, sales, and managing the demand. Predicting future demand and strategically considering the efficient allocation of resources to meet the demand entails supply chain planning. Sourcing entails the acquiring of the components and materials needed, then production is the act of transforming the materials into finished products (Omigie & Oguns-Obasohan, 2023).

SCM theory is sometimes criticized despite its many advantages. One concept states that SCM focuses too much on efficiency and cost savings, while ignoring aspects such as innovation and responding to changes in the marketplace (Bhagwat & Sharma, 2019). In rapidly evolving markets, the intensive emphasis on the efficiency of processes will restrain a firm's agility or capability to adapt to changing consumer preferences and trends. Furthermore, successful supply chain management (SCM) is greatly reliant on an extremely high degree of cooperation among the involved parties. When trust or communication is challenged in an uncertain situation, then collaboration may turn out to be very hard (Caniëls & Gelderman, 2020).

This theory will be applied to clarify supplier diversification variable as well as supplier development efforts. In other words, having a mix of different suppliers reduces the risks, and also, a more stable and reliable raw materials supply for a milk processor. On the other hand, supplier development, which is considered another significant SCM practice, is the act of acquiring the technical skills of suppliers through training, technology transfer, and process improvement, etc., which can ultimately lead to higher efficiency and better-quality products.

Empirical Review

Supplier Collaboration and Organizational Performance

Okeke, Emeka, and Dike (2023) conducted a research on how collaboration with suppliers affects the performance of companies in the textile industry in Nigeria. The research utilized purposive

sampling to select thirty managers from different textile firms and interviewed them. The research found that trust, communication, and commitment, especially in the case of suppliers, led to the innovation of the companies, which in turn resulted in a better position in the relevant markets. The study was based on qualitative data only, and therefore, limitations to the study were acknowledged. These limitations had an impact on the original conclusions about the performance of firms resulting in various sectors.

Mwangi and Opiyo (2022) explore the effect of collaboration with suppliers on the performance outcomes of the floriculture industry. The research design was a descriptive survey method. Researchers selected 100 flower exporting companies as the target population and embraced simple random sampling to assess the sample size. A questionnaire was utilized in the research to collect data on supplier performance and company competitiveness. The study indicated that suppliers contributed to the stability of the supply chain and at the same time enabled the companies to cut down on their operating costs. The present research highlights a lack of knowledge as it calls for more industries to be thoroughly analyzed, including the dairy industry which is a main contributor to the growth of the Kenyan economy.

Supplier Evaluation and Organizational Performance

Müller Schneider and Weber (2023) have completed a study in Germany which investigates how supplier evaluation affects the automotive industry. The research used multiple data collection techniques to gather information. The study population included 200 automotive manufacturers from which researchers used stratified sampling to choose 100 companies. Researchers used questionnaires to collect quantitative information and they conducted interviews to gather qualitative data. The survey revealed that strict supplier evaluation methods led to improved product quality and faster response times which made the industry more competitive. However, the research was cautious of the possibility that the heavy reliance on quantitative methods might have obscured the presence of complicated relational dimensions that would otherwise require a more exhaustive approach.

In Kenya, Muchiri and Muriuki (2022) studied on the supplier evaluation influence in the hospitality sector and concentrated on 90 hotels in Nairobi. The survey embraced a descriptive survey design with structured questionnaires to gather data on suppliers' evaluation criteria and their impact on operational performance. The outcomes revealed that a strong evaluation process had a tremendous positive influence on service delivery and client satisfaction. Nevertheless, this study did not consider the dairy processing industry, which is a knowledge gap connected to the current research, that is, milk processing companies in Kiambu County.

Supplier Diversification and Organizational Performance

A research in Nigeria by Nwankwo and Adeyemo (2022) focused on correlation between supplier diversity and profitability. A quantitative research methodology was utilized for the research. The

population was made up of twelve agricultural companies that were selected through purposeful sampling. Questionnaires were administered for data collection which investigated the relationship between supplier diversity and profitability, as well as market share. The results were quite revealing, showing that supplier diversification and the increase in profitability almost perfectly correlated; thus, the importance of supplier diversity in lowering risk of sole source dependence was again emphasized. However, the study did not consider local market situations which might create a contextual gap and thus lead to differing results across various regions.

Mwathi and Karanja (2022) examined the impact of different suppliers on the hotel business in Kenya by selecting 100 hotels in Nairobi. A simple survey method was embraced to gather data through predetermined questions that assessed customer satisfaction and hotel profits. The study revealed that the right management of multiple suppliers could enhance the overall operation and service quality at hotels significantly. The study, however, was restricted to the hotel sector and thus did not include other industries like milk processing, which is critical to the local economy.

Supplier Development Programs and Organizational Performance

AlNashmi and Begum (2022) analyzed the supplier development programs effect on execution of oil and gas sector in Kuwait. A descriptive survey methodology was utilized for this purpose, and data was gathered from 150 companies in the sector, which were selected through purposive sampling. Structured questionnaires were utilized for data gathering, which were developed to assess the participation in the supplier development program and the specific performance measures that were of interest (operational efficiency and labor productivity). It was found in the study that supplier development investment contributed to the improved efficiency of the supply chain and improved operational performance. Yet, the sustainability of supplier development programs was not looked into by the study, hence it is a gap in the field of knowledge.

Mwangi and Okoth (2022) researched on supplier development programs and their impact on performance in the tea processing industry in Kenya. The research was planned in such a way that it included descriptive surveys, and the companies that were randomly selected were from a population of 90 tea processing companies. The data were gathered via standardized questionnaires that included parameters of performance such as operational costs, delivery performance, and product quality. The findings showed that the supplier development programs had a major impact on the quality of the product and the minimization of the cost of production, thus making the industry more competitive. Nevertheless, the present study was mainly linked to tea industry, which could be different in case of other sectors, particularly the dairy sector where milk processing companies are the backbone of the economy.

Conceptual Framework

The conceptual framework positions four independent variables; supplier collaboration, supplier evaluation, supplier diversification, and supplier development programs as strategic procurement

practice dimensions that collectively influence the dependent variable: organizational performance of milk processing firms, measured through return on assets, customer satisfaction, and market share growth.

Independent Variables

Strategic Procurement Practices

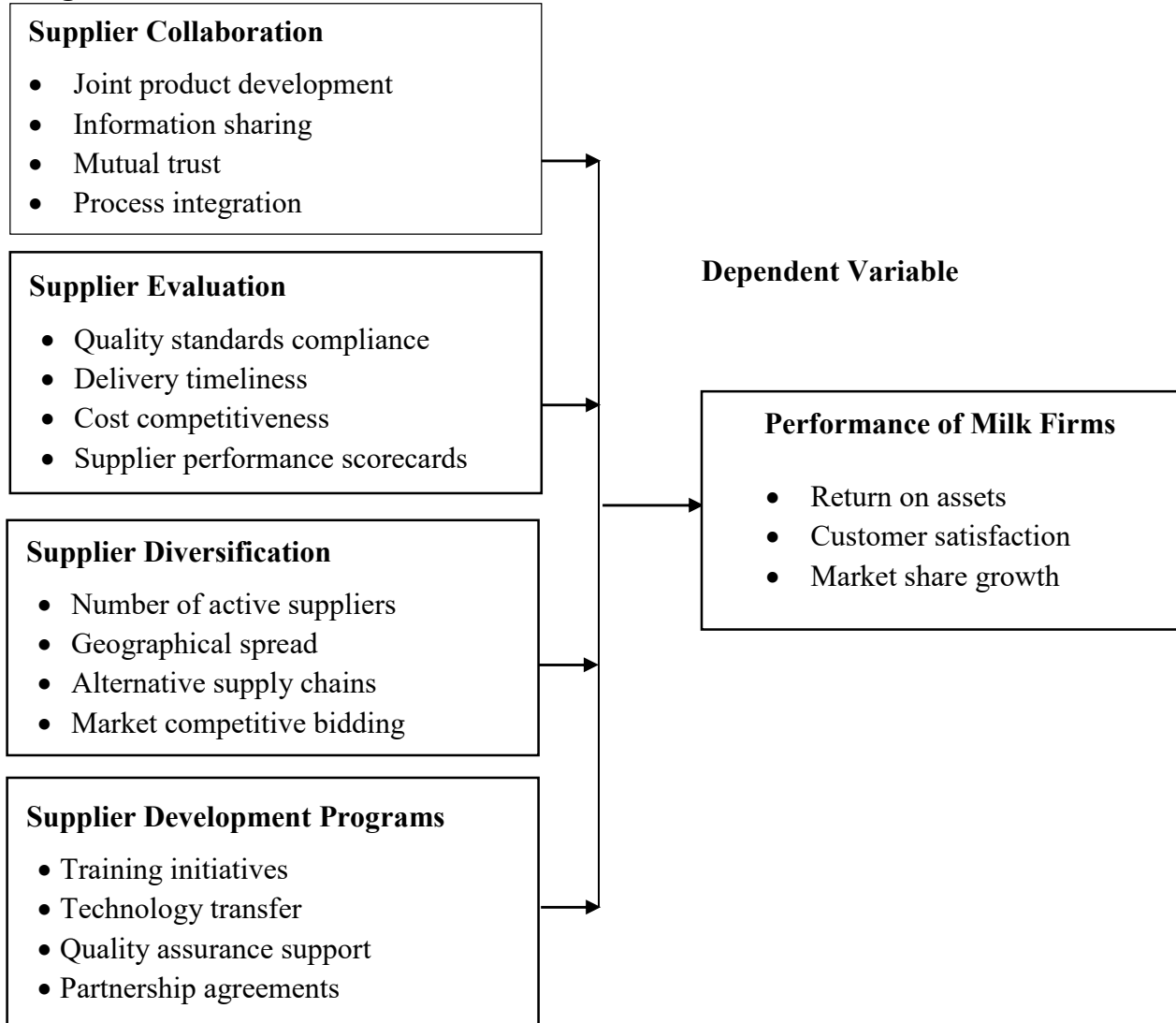


Figure 1 Conceptual Framework

Source: Author (2025)

RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive research design, which is appropriate for systematically describing characteristics of a population and examining relationships among variables without manipulating

the independent variables (Saunders, Lewis & Thornhill, 2019). This design is widely applied in procurement and organizational performance research (Fynes, de Búrca & Voss, 2020).

Target Population and Sampling

The target population comprised all 17 registered milk processing firms in Kiambu County, Kenya, as listed by the Kenya Dairy Board (2023). The observational units consisted of 17 senior managers, 34 procurement officers, and 51 operational staff, totaling 102 respondents. A census sampling approach was adopted, ensuring all 102 respondents were included to eliminate sampling bias and maximize data comprehensiveness, as is appropriate for small, specialized organizational populations (Creswell, 2019).

Data Collection

Primary data were collected through structured, self-administered questionnaires with closed-ended items on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), distributed using a drop-and-pick method. Secondary data on financial performance were obtained from organizational records, websites, and the Kenya Dairy Board. A pilot study involving 10 respondents from Murang'a County confirmed instrument reliability, with Cronbach's alpha values ranging from 0.781 to 0.816, all exceeding the 0.70 threshold recommended for social science research (Ahmed & Ishtiaq, 2021).

Data Analysis

Data were analyzed using IBM SPSS Version 27. Descriptive statistics, including means and standard deviations, were used to characterize responses on each study variable. Pearson correlation analysis examined the direction and strength of bivariate relationships between each procurement dimension and organizational performance. Multiple linear regression analysis was then employed to assess the simultaneous predictive effects of the four procurement dimensions on organizational performance, using the model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where Y = organizational performance; X_1 = supplier collaboration; X_2 = supplier evaluation; X_3 = supplier diversification; X_4 = supplier development programs; and ε = error term.

RESEARCH FINDINGS AND DISCUSSION

Out of 102 questionnaires distributed, 95 were returned fully completed, yielding a response rate of 93.1%. This rate is considered excellent for organizational research, as Sekaran and Bougie (2020) affirm that response rates above 70% are adequate for statistical analysis and reporting.

Inferential Statistics

Pearson Correlation Analysis

Pearson correlation analysis was conducted to examine the strength and direction of the bivariate relationships between each strategic procurement dimension and organizational performance. The results are presented in Table 1.

Table 1: Pearson Correlation Analysis Results

Variable	Org. Performance	Sup. Collaboration	Sup. Evaluation	Sup. Diversification	Sup. Dev. Programs	p- value
Organizational Performance	1					
Supplier Collaboration	0.631**	1				0.000
Supplier Evaluation	0.614**	0.542**	1			0.000
Supplier Diversification	0.578**	0.519**	0.528**	1		0.000
Supplier Development Programs	0.647**	0.553**	0.537**	0.511**	1	0.000

*** Correlation is significant at the 0.01 level (2-tailed). Source: Field Data (2026)*

The Pearson correlation results in Table 1 reveal that all four strategic procurement practice dimensions were positively and significantly correlated with organizational performance at the 0.01 significance level. Supplier development programs recorded the strongest correlation with organizational performance ($r = 0.647$, $p < 0.01$), indicating that investment in supplier training, capacity building, and financial support yields the most pronounced benefits for milk processing firms' performance. This finding is consistent with Mwangi and Muriuki (2021), who established that supplier development programs in Kenya's dairy sector create a mutually beneficial ecosystem that improves both operational efficiency and financial results for processors and their suppliers. Supplier collaboration was the second strongest correlate ($r = 0.631$, $p < 0.01$), affirming that close, transparent partnerships with raw milk suppliers contribute substantially to improved production consistency, cost reduction, and supply chain stability. Wanjiku and Mwangi (2022) similarly found that dairy companies in Kiambu County with stronger supplier partnerships experienced fewer supply interruptions and higher milk quality. Supplier evaluation demonstrated a moderately strong positive relationship ($r = 0.614$, $p < 0.01$), confirming that structured supplier assessment processes improve accountability, regulatory compliance, and product consistency, as corroborated by Odhiambo and Otieno (2022) who found that Kenyan dairy processors undertaking regular supplier audits achieved higher customer satisfaction and lower product recall rates.

Supplier diversification recorded the weakest yet still statistically significant correlation ($r = 0.578$, $p < 0.01$), reflecting its role as a risk management and resilience mechanism rather than a direct performance driver. Mutua and Omondi (2021) similarly established that supplier diversification is the most effective method for East African dairy processors to mitigate supply chain risks. Notably, all four procurement dimensions showed moderate positive intercorrelations (ranging from $r = 0.511$ to $r = 0.553$), suggesting complementarity among the practices without evidence of multicollinearity, as confirmed by the VIF diagnostic results.

Regression Analysis

Model Summary

A multiple linear regression model was estimated to determine the joint predictive power of the four strategic procurement dimensions on organizational performance. The model summary results are presented in Table 2.

Table 2: Model Summary Results

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.843	0.711	0.698	0.116

Source: Field Data (2026)

The model summary in Table 2 reveals a multiple correlation coefficient of $R = 0.843$, demonstrating a strong combined relationship between the four strategic procurement dimensions and organizational performance. The coefficient of determination $R^2 = 0.711$ indicates that supplier collaboration, supplier evaluation, supplier diversification, and supplier development programs together explain 71.1% of the variance in organizational performance of milk processing firms in Kiambu County. The adjusted R^2 of 0.698, which accounts for the number of predictors in the model, confirms its substantial explanatory power. The standard error of the estimate (0.116) indicates high predictive precision. These results are consistent with Ngugi and Wachira (2022), who found that strategic procurement factors collectively accounted for a significant share of performance variance in Kenyan food processing companies.

Analysis of Variance (ANOVA)

The overall statistical significance of the regression model was assessed through ANOVA, with results presented in Table 3.

Table 3: ANOVA Results

Source	Sum of Squares	df	Mean Square	F-Statistic	Sig.
Regression	21.43	4	5.358	57.31	0.000
Residual	8.41	90	0.093	—	—
Total	29.84	94	—	—	—

Field Data (2026)

The ANOVA results in Table 3 confirm that the overall regression model is statistically significant ($F = 57.31$, $p = 0.000$), well below the 0.05 significance threshold. The regression sum of squares (21.43) substantially exceeds the residual sum of squares (8.41), indicating that the model accounts for a large proportion of the explained variance relative to unexplained variance. This outcome establishes that supplier collaboration, supplier evaluation, supplier diversification, and supplier development programs jointly and significantly predict organizational performance in milk processing firms in Kiambu County. These findings align with Karanja and Ngugi (2020), who documented that strategic procurement methods jointly and significantly predicted organizational success in Kenya's food and beverage manufacturing sector.

Regression Coefficients

The individual contributions of each strategic procurement dimension to organizational performance are presented in Table 4.

Table 4: Regression Coefficient Results

Variables	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	0.412	0.143		2.881 0.005
Supplier Collaboration	0.248	0.048	0.231	5.167 0.000
Supplier Evaluation	0.236	0.051	0.219	4.627 0.000
Supplier Diversification	0.194	0.047	0.184	4.128 0.000
Supplier Development Programs	0.263	0.052	0.247	5.058 0.000

Source: Field Data (2026)

The regression coefficients in Table 4 yield the following estimated model:

$$Y = 0.412 + 0.248X_1 + 0.236X_2 + 0.194X_3 + 0.263X_4 + \varepsilon$$

All four predictor variables exerted statistically significant positive effects on organizational performance ($p < 0.001$). Supplier development programs (X_4) emerged as the strongest predictor ($B = 0.263$, $Beta = 0.247$, $t = 5.058$, $p < 0.001$), indicating that a one-unit improvement in supplier development practices produces a 0.263-unit improvement in organizational performance, holding other variables constant. This result reflects the critical role of formal supplier training, capacity building initiatives, and financial support in enhancing the quality and volume of raw milk received by processing firms. Gitonga and Wanjiku (2022) similarly established that Kenyan dairy

companies investing in structured farmer development programs recorded significantly higher rates of adherence to milk hygiene standards.

Supplier collaboration (X_1) was the second strongest predictor ($B = 0.248$, $\text{Beta} = 0.231$, $t = 5.167$, $p < 0.001$). The magnitude of this coefficient indicates that organizations fostering strong, long-term partnerships with their suppliers through information sharing, joint planning, and coordinated logistics achieve measurable reductions in operational expenses and improvements in supply chain continuity. Wanjiku and Mwangi (2022) corroborated this finding, establishing that Kiambu County dairy firms with stronger supplier partnerships experienced reduced supply interruptions and improved milk quality outcomes.

Supplier evaluation (X_2) demonstrated a significant positive effect on organizational performance ($B = 0.236$, $\text{Beta} = 0.219$, $t = 4.627$, $p < 0.001$). Structured, continuous evaluation of suppliers based on quality, delivery reliability, and regulatory compliance reduces the risk of procuring substandard raw milk and strengthens supply chain dependability. These findings align with Odhiambo and Otieno (2022), who found that Kenyan dairy processors conducting regular supplier audits achieved higher customer satisfaction and lower product recall rates than those relying on informal evaluation methods.

Supplier diversification (X_3), while the weakest of the four predictors, nonetheless exerted a statistically significant positive effect on organizational performance ($B = 0.194$, $\text{Beta} = 0.184$, $t = 4.128$, $p < 0.001$). This result underscores the importance of maintaining a broad supplier network across different agro-ecological zones and regions as a buffer against seasonal supply fluctuations a particularly relevant consideration in Kiambu County where milk availability varies significantly across seasons. Mutua and Omondi (2021) affirmed that dairy processors in East Africa with diversified supplier bases demonstrate superior operational continuity during periods of reduced milk availability.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that strategic procurement practices are critical determinants of organizational performance in milk processing firms in Kiambu County, Kenya. Supplier development programs exert the greatest influence by directly improving the quality and reliability of raw milk input, while supplier collaboration reduces operational costs and production variability through stronger inter-firm relationships. Supplier evaluation enhances regulatory compliance, product consistency, and supply chain accountability, and supplier diversification strengthens resilience against seasonal and regional supply disruptions. Together, these four practices form an integrated procurement system that substantially improves firm-level financial performance, customer satisfaction, and market competitiveness.

Recommendations

Based on the findings, the following recommendations are offered. First, milk processing firms should prioritize investment in structured supplier development programs, including training workshops for smallholder farmers on milk hygiene, quality testing, and animal husbandry, complemented by co-investment in milk cooling equipment. Second, firms should formalize supplier evaluation frameworks with clear, measurable Key Performance Indicators (KPIs) covering quality, delivery reliability, hygiene compliance, and pricing competitiveness, with performance reviews tied to procurement decisions. Third, firms should pursue deliberate supplier diversification strategies by onboarding suppliers from multiple regions and agro-ecological zones and farmer cooperative societies to reduce over-reliance on single sourcing areas. Fourth, firms should invest in collaborative platforms with key suppliers, including joint demand forecasting systems and co-investment in milk collection centers. Fifth, the Kenya Dairy Board and the Ministry of Agriculture should develop regulatory frameworks mandating minimum supplier evaluation standards for licensed dairy processors, protecting consumer health and supporting supply chain sustainability.

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