

Research Article

Supply Diversification Strategy and Performance of Manufacturing Firms in Nakuru County, Kenya

^a*David Orinyo Opondo and ^bDancun Nyaberi

^{a&b}Department of Supply Chain Management, Jomo Kenyatta University of Agriculture and Technology, P.O. Box 62000-00200 Nairobi, Kenya

*Corresponding Author Email: dorinyo@gmail.com

Article History	Abstract
Received: May 20, 2026 Accepted: June 13, 2026 Published: June 19, 2026	Although manufacturing remains central to Kenya's economic growth, contributing 7–10% of GDP, the sector continues to grapple with persistent supply chain disruptions that hinder firm performance. Against this backdrop, the study sought to evaluate the effect of supplier diversification strategy on the performance of manufacturing firms in Nakuru County, Kenya, with a primary focus on supplier diversification as the first objective. The study is significant to manufacturing firms as it provides insights into how supplier diversification, alongside other risk mitigation strategies, directly influences operational efficiency, resilience, and profitability. Anchored on the Resource-Based View, the research adopted a descriptive and explanatory design. The target population comprised managers, supply chain officers, and operations supervisors from all registered manufacturing firms in Nakuru County. A census approach was used due to the relatively small population size. Data was collected using structured questionnaires, piloted in Narok County, and refined for validity through Exploratory and Confirmatory Factor Analysis. Reliability was confirmed using Cronbach's Alpha (threshold ≥ 0.7). Quantitative data were analyzed using descriptive statistics (means, frequencies, percentages) and inferential statistics (correlation and regression analysis) with SPSS software. Results confirmed that supplier diversification is statistically a significant determinant of firm performance. Supplier diversification emerged as a critical enabler of continuity, reducing dependency on single sources and enhancing resilience against disruptions. Accordingly, it recommends that policymakers incentivize supplier diversification, firms institutionalize structured multi-sourcing practices, and government agencies support digitization and mapping tools to enhance visibility, coordination, and proactive risk management for long-term competitiveness. Keywords: Supply Diversification Strategy, Manufacturing Firms, Supply Chain Management, Firm Performance.

Introduction

Globally, supply chain responsiveness is enhanced through flexible manufacturing footprints and adaptive logistics networks. McKinsey (2026) highlights that firms are redesigning supply chains to respond quickly to shocks, using tax incentives, export controls, and digital monitoring to ensure agility. These strategies underscore a shift from cost-driven models to resilience-driven frameworks, where responsiveness is achieved through proactive planning and real-time data integration. Manufacturing firms in advanced economies have increasingly prioritized supply chain resilience in response to disruptions from COVID-19, geopolitical tensions, and climate-related events (Deloitte, 2024). In the United States and Canada, firms are restructuring supply bases to balance efficiency with resilience, often leveraging digital tools for visibility and predictive analytics (Deloitte, 2024). Germany and Norway emphasize industrial policy, sustainability, and diversification of suppliers to mitigate geopolitical risks, while Australia focuses on regional trade integration and insurance-backed risk modeling (Willis Towers Watson, 2025).

The U.S. manufacturing sector has prioritized reshoring and diversification to mitigate risks, especially after COVID-19 and geopolitical tensions. The Quadrennial Supply Chain Review (2021–2024) emphasized strengthening critical supply chains through redundancy, reshoring, and advanced analytics to enhance resilience and responsiveness (International Trade Administration, 2021). Deloitte (2025) also highlighted policy-driven shifts toward agility and resilience in U.S. manufacturing supply chains, stressing responsiveness to disruptions through digitalization and flexible sourcing strategies. UNCTAD (2023) notes that African supply chains are highly exposed to global shocks, making resilience strategies—such as supplier diversification, localized production, and improved logistics security—critical for performance. Responsiveness in this context often depends on regional trade agreements and infrastructural investments that reduce lead times and enhance adaptability.

Kenya's manufacturing sector contributes 7–10% of GDP and is central to Vision 2030 industrialization goals. However, firms face significant supply chain disruptions from global shocks, local infrastructural challenges, and supplier dependency (Kenya National Bureau of Statistics [KNBS], 2024; Adan, 2025). Studies in Nairobi County show that risk avoidance and prevention strategies, such as supplier diversification, inventory buffers, and visibility systems, directly enhance resilience (Gachuhi, 2023). According to the Kenya National Bureau of Statistics (KNBS) Economic Survey 2024, manufacturing contributed 7.3% to GDP in 2024, valued at Ksh 1.18 trillion, with food, beverages, and tobacco accounting for Ksh 660 billion and other manufacturing activities at Ksh 516.4 billion. Nairobi County alone contributed 36.4% of manufacturing GDP between 2020–2024, underscoring regional concentration risks. Despite this growth, infrastructural limitations, policy inconsistencies, and global shocks continue to undermine supply chain stability, exposing firms to volatility in input costs and logistics inefficiencies.

KNBS data highlights that manufacturing growth slowed to 2.8% in 2024, compared to 2.2% in 2023, reflecting vulnerability to external shocks. Studies emphasize that firms adopting supplier diversification, redundancy, and inventory buffers demonstrate stronger resilience. For example, the Kenya Association of Manufacturers (KAM) Barometer 2025 reported that firms with proactive risk management maintained higher operating capacity levels despite rising input costs. This aligns with KNBS findings that disruptions in global trade and local infrastructure directly affect production output and competitiveness.

Objective of the Study

To assess the effect of supply diversification strategy on performance of manufacturing firms in Nakuru County.

Literature Review

Globally, supply diversification is framed within resilience and risk management theories. Song *et al.*, (2025) argue that diversified supply chain structures, moderated by digital technologies, foster high-quality development by reducing dependency on single suppliers and mitigating systemic risks. Their findings align with resource-based and dynamic capabilities theories, which posit that firms leveraging diversified supply bases gain strategic flexibility and competitive advantage (Song *et al.*, 2025). Similarly, Ahn and Tan (2025) emphasize diversification as a resilience mechanism in global supply chains, noting that firms with broader supplier networks recover faster from disruptions such as pandemics and geopolitical shocks (Ahn and Tan, 2025). These perspectives converge on the idea that diversification is not merely operational but strategic, enhancing long-term sustainability.

Rajab (2024) highlights that Kenyan manufacturing firms engaging in supply chain alliances benefit from improved performance through shared resources and risk distribution. This resonates with contingency theory, which suggests that firms must adapt strategies to environmental uncertainties. Moreover, regional studies reveal that diversification strategies are essential in contexts marked by infrastructural deficits and policy inconsistencies, as they buffer firms against volatility in supply availability and costs (Rajab, 2024). The IMF's broader regional analysis also supports this, noting that diversification enhances resilience in economies heavily reliant on imports (Ahn and Tan, 2025). Locally, Kenyan scholarship provides nuanced insights into diversification and firm performance. Kimwaki (2023) demonstrates that configuring supply chains strategically—including diversification—significantly improves manufacturing performance in Kenya, particularly in sectors vulnerable to market volatility. Muriithi (2022) further anchors diversification within theories such as transaction cost economics and dynamic capabilities, showing that diversified strategies reduce procurement risks and enhance operational efficiency. Roseline and Shale (2025) emphasize resilience, noting that diversification helped Nairobi-based firms sustain operations during COVID-19 disruptions and policy inconsistencies. Collectively, these studies affirm that diversification is both a survival and growth strategy for Kenyan manufacturers.

Materials and Methods

The study employed a descriptive and explanatory research design to investigate the effect of supply chain risk mitigation strategies on firm performance. This design was chosen to both describe existing practices and establish causal relationships. The population comprised 135 respondents drawn from registered manufacturing firms in Nakuru County, specifically senior managers, supply chain officers, and operations supervisors. Given the relatively small population, a census approach was adopted, with stratification by firm size to ensure representativeness and minimize bias.

Data was collected using structured questionnaires containing closed-ended and Likert-scale items, enabling standardized quantitative measurement of risk mitigation strategies and performance indicators. A pilot study involving 10% of the sample from Uasin Gishu County was conducted to refine the instrument. Validity was ensured through construct alignment and factor analysis (EFA and CFA), while reliability was tested using Cronbach's Alpha, with a threshold of 0.7 for internal consistency. Data collection followed ethical protocols, including informed consent and confidentiality, with permits obtained from NACOSTI. Questionnaires were distributed both physically and electronically to maximize response rates. Quantitative data analysis involved descriptive statistics (means, frequencies, percentages) and inferential statistics (correlation and regression analysis) using SPSS software. Results were presented in tables for clarity. The regression model tested the relationship between supply diversification, inventory buffering, supply chain mapping, and technology integration against firm performance at a 95% confidence level.

Results

The study was analysed both descriptively and through inferential statistics as describe in the sub sections below.

Descriptive Analysis

Before running the regression analysis, the data was first checked through a basic review. This step helped explain why average (mean) scores were used to evaluate the responses. Participants answered using a 5-point Likert scale, following the guidelines of Joshi *et al.*, (2015) as well as Nemoto and Beglar (2014).

The scale was interpreted as: 4.3–5.0 = Strongly Agree; 3.5–4.2 = Agree; 2.5–3.4 = Undecided; 1.9–2.4 = Disagree and 1.0–1.8 = Strongly Disagree. The mean was calculated for each variable to show the overall tendency of responses, offering a clearer picture than the median. In addition, the standard deviation was used to show how spread out the responses were, indicating how much individual answers differed from the average.

Supply Diversification Strategy and Performance

This section presents the findings on the supply diversification strategy among manufacturing firms in Nakuru County.

Table 1. Supply diversification strategy.

Statements	N	Min	Max	Mean	SD
Our firm engages multiple active suppliers to reduce dependency on a single source.	126	1	5	3.80	.921
Having several active suppliers enhances our firm's operational performance.	126	1	5	4.15	.898
Active supplier relationships improve flexibility in meeting production demands.	126	1	5	3.99	1.068
Our firm has established alternative sourcing channels to mitigate supply risks.	126	1	5	3.67	1.053
Alternative sourcing strategies contribute positively to firm performance.	126	1	5	3.61	1.172
Access to alternative suppliers ensures continuity during supply disruptions.	126	1	5	4.15	.948
Regular supplier evaluations improve the quality of inputs received.	126	1	5	3.66	1.072
Supplier performance evaluations enhance efficiency and reduce operational costs.	126	1	5	4.05	.991
Continuous supplier assessment strengthens long-term firm competitiveness.	126	1	5	3.80	1.133

Findings from Table 1 revealed that firms generally embrace supply diversification strategies as a means of enhancing operational resilience and performance. The statement “Our firm engages multiple active suppliers to reduce dependency on a single source” recorded a mean of 3.80 with a relatively low standard deviation (.921), indicating that most respondents agreed with this practice and that there was consistency in their views. This suggests that reliance on multiple suppliers is a widely accepted risk mitigation approach within the sampled firms.

The perception that “Having several active suppliers enhances our firm’s operational performance” was strongly supported, with the highest mean score of 4.15 and a standard deviation of .898. This demonstrates that respondents not only recognize the importance of supplier diversification but also directly link it to improved operational outcomes such as efficiency, reliability, and competitiveness. Similarly, the statement “Access to alternative suppliers ensures continuity during supply disruptions” also scored a mean of 4.15, reinforcing the idea that diversification is critical in sustaining operations during crises.

Flexibility in production demands was also highlighted, with “Active supplier relationships improve flexibility in meeting production demands” achieving a mean of 3.99. Although slightly lower than operational performance measures, this still reflects strong agreement among respondents. The relatively higher standard deviation (1.068) suggests some variation in experiences, possibly due to differences in industry sectors or supplier reliability.

The establishment of alternative sourcing channels was moderately supported, with a mean of 3.67 and a standard deviation of 1.053. This indicates that while many firms have embraced alternative sourcing, there is still variability in implementation levels. Similarly, “Alternative sourcing strategies contribute positively to firm performance” had a mean of 3.61, the lowest among the items, with a higher standard deviation (1.172). This implies that although firms recognize the potential benefits, the actual impact of alternative sourcing on performance may differ depending on context. Supplier evaluation practices were also emphasized. “Regular supplier evaluations improve the quality of inputs received” scored a mean of 3.66, while “Supplier performance evaluations enhance efficiency and reduce operational costs” had a higher mean of 4.05. These findings highlight the importance of continuous monitoring and assessment of suppliers in ensuring quality and cost-effectiveness. The relatively high mean scores suggest that supplier evaluation is not only practiced but also perceived as a key driver of operational efficiency.

Finally, “Continuous supplier assessment strengthens long-term firm competitiveness” recorded a mean of 3.80 with a standard deviation of 1.133. This reflects agreement that ongoing supplier assessment contributes to sustained competitiveness, though the higher variability indicates differing levels of maturity in supplier management practices across firms. In summary, the analysis shows that supply diversification strategies are widely recognized as essential for operational performance, continuity, and competitiveness. The strongest consensus was observed in the role of multiple suppliers and alternative sourcing in enhancing performance and mitigating risks. However, variability in responses suggests that while many firms have adopted these practices, the extent and effectiveness of implementation differ. Overall, the findings underscore the strategic importance of supplier diversification and evaluation in building resilient and high-performing organizations.

Inferential Analysis

This section presents the linear regression analysis conducted to assess the effect of supply diversification strategy on the performance of manufacturing firms in Nakuru County. The analysis quantifies the extent to which diversifying suppliers contributes to resilience and operational efficiency.

Table 2. ANOVA for supplier diversification and performance.

Model	Sum of squares	df	Mean square	F	Sig.
Regression	205.133	1	205.133	3039.59	.000 ^b
Residual	8.520	124	0.069	-	-
Total	213.653	125	-	-	-
a. Dependent variable: PMF					
b. Predictors: (Constant), SDS					

The ANOVA results demonstrate that supplier diversification strategy has a highly significant effect on the performance of manufacturing firms. The F-value of 3039.59 with a p-value of .000 confirms that the predictor strongly explains variations in performance. The residual variance is minimal, indicating that the regression model is statistically robust and that supplier diversification is a powerful determinant of firm outcomes.

Table 3. Model summary for supplier diversification and performance.

Model summary^b					
Model	R	R square	Adjusted R square	Standard error of the estimate	Durbin-Watson
1	.980 ^a	.960	.960	0.264	2.069
a. Predictors: (Constant), Supplier diversification					
b. Dependent variable: PMF					

Table 3 presents the model summary for the relationship between supplier diversification and the performance of manufacturing firms. The results indicate a very strong correlation ($R = 0.980$), with an R square value of 0.960, suggesting that supplier diversification explains 96% of the variation in firm performance. The adjusted R square, also at 0.960, confirms the robustness of the model, while the low standard error of the estimate (0.264) demonstrates high precision in prediction. Furthermore, the Durbin-Watson statistic of 2.069 falls within the acceptable range, indicating that there is no significant autocorrelation in the residuals. Collectively, these findings reaffirm that supplier diversification strategy is a highly significant predictor of manufacturing firm performance in Nakuru County.

Table 4. Coefficients for supplier diversification and performance.

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
(Constant)	0.916	0.076	-	12.05	.001
Supplier diversification	0.819	0.018	0.980	45.50	.000 ^b
a. Dependent variable: PMF					

The coefficients analysis highlights the magnitude of the predictor's contribution. Supplier diversification strategy, measured through industry collaboration practices, has a very high standardized beta coefficient ($\beta = .980$), with a t-value of 45.50 and a p-value of .000, confirming its strong and statistically significant impact on performance. The unstandardized coefficient ($B = 0.819$) indicates that a unit increase in supplier diversification leads to a substantial improvement in firm performance. The constant term ($B = 0.916$) shows the baseline level of performance when the predictor is held constant. In summary, the findings demonstrate that supplier diversification strategy is a critical determinant of manufacturing firm performance.

Conclusions

The study concludes that a supply diversification strategy is a critical determinant of manufacturing firm performance, exerting a strong positive and statistically significant effect. By broadening the range of suppliers, firms enhance their resilience against disruptions such as geopolitical tensions, natural disasters, or market volatility. Diversification also improves efficiency by reducing dependency on single sources, fostering competitive pricing, and enabling access to innovative inputs. Furthermore, it strengthens competitiveness in global markets by ensuring continuity of operations, sustaining customer trust, and supporting long-term strategic growth.

Recommendations of the Study

- 1) Governments should design policies that provide tax breaks, subsidies, or low-interest loans to manufacturing firms that actively diversify their supplier base. This reduces systemic risk and strengthens national economic resilience.
- 2) Policymakers should streamline customs procedures and negotiate trade agreements that make it easier for firms to access multiple international suppliers, thereby lowering barriers to diversification.
- 3) Manufacturing firms should establish internal frameworks to continuously assess supplier reliability, geopolitical risks, and market volatility, ensuring diversification decisions are data-driven and proactive.
- 4) Institutions should invest in training procurement teams to develop advanced skills in supplier negotiation, global sourcing, and risk analysis, enabling them to implement diversification strategies effectively.

Declarations

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