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Original article

Supplier management and organizational performance of manufacturing organizations in Mogadishu. A cross-sectional study.

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Abstract

Background

The study aimed to determine the relationship between supplier management and organizational performance of manufacturing organizations in Mogadishu.

Methodology

The study employed a descriptive explanatory survey design involving 33 manufacturing organisations in Mogadishu, Somalia. The target population comprised 88 employees from procurement, supply chain, logistics and operations departments. A census approach was used to include the entire target population. Structured questionnaires were administered to collect primary data. Validity was assessed using the Content Validity Index, and reliability was established using Cronbach's Alpha. Descriptive statistics and linear regression were applied to analyse data at a 0.05 significance level. Informed consent, honesty, confidentiality and anonymity guided ethical conduct**.**

Results

The study achieved a response rate of 78% (69/88). Regarding age, 9 (13.0%) respondents were aged 21–30 years, 22 (31.9%) were 31–40 years, 27 (39.1%) were 41–50 years, and 11 (15.9%) were above 50 years. Supplier management recorded an overall mean of 3.75652 (SD=0.8783). Agreement was highest for long-term supplier partnerships (75.4%), followed by collaboration on quality standards (75.3%), regular supplier evaluation (73.9%), regulatory compliance assessment (73.9%) and responsiveness to demand changes (69.6%). Regression analysis established a positive relationship between supplier management and organisational performance ($R=0.750$, $R^2=0.562$, adjusted $R^2=0.555$, $F=85.888$, $p=0.000$). Supplier management significantly predicted organisational performance ($B=0.606$, $SE=0.065$, $\beta=0.750$, $t=9.268$, $p=0.000$). The constant was 3.695 ($SE=1.235$, $t=2.992$, $p=0.004$). Supplier management explained 55.5% of performance variation.

Conclusion

Supplier management is a highly valued aspect of integration among manufacturing organisations in Mogadishu, Somalia.

Recommendation

Supply chain managers of the manufacturing firms in Mogadishu should aggressively and proactive intensify long term partnership and collaboration with suppliers in new product development.

Keywords: *Supplier management, Organizational performance, Supplier relationships, Supply chain integration, Manufacturing firms*
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Background of the study

Supplier management is an essential supply chain management practice involving the identification, selection, evaluation, development, and maintenance of relationships with suppliers to ensure the consistent availability of quality goods and services. It enables organizations to establish reliable supply networks, control procurement costs, maintain product quality, and ensure timely delivery of required materials. In manufacturing organizations, effective supplier management is particularly important because production activities depend on the reliability, quality, and responsiveness of suppliers. Ahmad et al. (2021) emphasize the importance of managing supplier-related risks in improving supply chain performance, while Li et al. (2006) associate effective supply chain management practices with improved competitive advantage and organizational performance.

Previous studies have demonstrated that supplier management contributes to improved organizational performance through effective supplier selection, collaboration, and relationship management. Arshad et al. (2022) examine the relationship between supplier risk management and project performance, highlighting the mediating role of supplier relationship management practices. Similarly, Song and Chen (2021) emphasize the

importance of supplier relationship management in strengthening organizational performance. Kim et al. (2021) further demonstrate the contribution of supplier collaboration to product quality, delivery performance, and customer satisfaction. These findings suggest that effective supplier management strengthens operational efficiency and organizational competitiveness.

Supplier management also contributes to organizational performance through improved supply chain coordination, flexibility, and risk management. Sharma and Adhikary (2020) examine the impact of supplier collaboration on supply chain performance, emphasizing the importance of collaborative supplier relationships. Similarly, Zhang et al. (2021) highlight the relationship between supply chain flexibility, agility, and firm performance, particularly in the context of supply chain risk management. Liu et al. (2020) also examine how supply chain agility and risk management influence financial and market performance. These studies demonstrate the importance of maintaining reliable supplier relationships to minimize operational disruptions and improve organizational responsiveness.

Technological developments have further transformed supplier management practices through digital systems and improved information accessibility. Lee et al. (2022) examine digitized supplier management and its contribution to supply chain performance and customer satisfaction. Additionally, Hendijani and Saeidi Saei (2025) highlight the relationship between supply chain integration, competitive strategies, and firm performance. Jama et al. (2024) also emphasize the contribution of supply chain integration to organizational performance. Furthermore, Jama et al. (2025) examine the role of internal and external integration in optimizing supply chain performance among Somali small and medium-sized enterprises. Warsame et al. (2025) further explore the relationship between supply chain management and operational performance among manufacturing firms in Mogadishu.

The study aimed to determine the relationship between supplier management and organizational performance of manufacturing organizations in Mogadishu.

Methodology

Research Design

Descriptive explanatory survey research design was used to obtain information from the various organizations. The information collected is then quantified in order to draw conclusions on the subject under study. The research aimed at finding out the effects of supply chain integration on operational performance of manufacturing organizations in Somalia, which was achieved through explanatory design.

Target Population

According to the official industrial framework outlined by the Ministry of Commerce and Industry and validated in economic studies, there are 33 manufacturing organisations in Mogadishu that formed the unit of analysis in this study. From these organisations, the study targeted employees in the procurement, supply chain, logistic or operations departments adding to 88 respondents as presented in Table 1.

Table 1: Target Population

Category of manufacturing firm	Number of organisations (Unit of analysis)	Total number of employees in the procurement, supply chain, logistic or operations departments or their equivalents (Unit of observation)
Mineral and Bottled Water Production	7	19
Plastic Bags & Packaging	5	18
Foam Mattresses & Pillows	5	17
Detergent & Soap Production	6	15
Aluminum & Metal Processing	3	5
Stone & Construction Materials Processing	4	8
Fishing Boat Manufacturing	3	6
Total	**33**	**88**

Source: Ministry of Commerce and Industry & HR Records of respective manufacturing organisations (2025)

Sample size and Sampling procedures

Sample size refers to the number of observations or data points included in a study or survey. It is a critical aspect of research design as it affects the reliability and validity of the study's findings. In this study, as the target population of the study was small and could easily be accessed in Mogadishu Somalia, census was undertaken.

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Data Collection Instruments

Data collection is a tool that is used to collect data. This study collected primary data with the use of structured questionnaire. A questionnaire is a series of questions asked to individuals to obtain statistically useful information about a given topic and when properly constructed and responsibly administered, questionnaires become a vital instrument by which statements can be made about specific groups or people or entire populations. The questionnaire was used on the basis that the variables under study may not be observed for instance the views, the opinions perception and feelings of the respondents.

Data Quality

Data quality in this study was determined on the basis of validity and reliability analysis as discussed in the subsequent sections.

Validity of instrument

The supervisor reviewed the instrument items and rated them as very relevant (VR), relevant (R), or not relevant. The Content Validity Index (CVI) was then calculated based on the ratings.

Reliability

The internal consistency of the questionnaire items was assessed using Cronbach's Alpha coefficient in SPSS. Reliability was considered higher when the Cronbach's Alpha coefficient approached 1.00, in accordance with the guidelines.

Table 2 provide summary of findings of reliability, that were determined by computing values of Cronbach Alpha Coefficients.

Table 2: Reliability Results

Variable	Number of items	Cronbach Alpha Coefficient α	Remark
Information Sharing	5	.786	α>0.7 thus scale used was reliable
supplier management	5	.807	α>0.7 thus scale used was reliable
supply chain agility	5	.975	α>0.7 thus scale used was reliable
Organizational Performance	5	.867	α>0.7 thus scale used was reliable

Source: Research Data (2026)

Data Analysis

Data analysis in this study mainly consisted of descriptive statistics (percentages, means and standard deviations) and inferential statistics (linear regression regression). The percentages were used to determine the respondents' views on supply chain integration and organisational performance. On the other hand, linear regression analysis helped to estimate the effect of individual elements of integration on performance. The three linear regression models that were adopted in this took the following form

$$Y = \beta_0+\beta_1X_1 +\varepsilon \quad \text{i}$$

Where:
Y = Organisational performance
β_0 = constant
β_0, β_1= beta coefficients
X_1 = information sharing
ε = error term

$$Y = \beta_0 +\beta_2X_2+\varepsilon \quad \text{ii}$$

Where:
Y = Organisational performance
β_0 = constant
β_0, β_1= beta coefficients
X_2 = supplier management
ε = error term

$$Y = \beta_0 +\beta_3X_3 +\varepsilon \quad \text{iii}$$

Where:
Y = Organisational performance
β_0 = constant
β_0, β= beta coefficients
X_3 = supply chain agility
ε = error term

Equation i, ii and iii were used to establish the individual effects of specific elements of supplier integration on performance of the manufacturing organisations. The p-

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values from each of these regression models were interpreted at 5% or 0.05 level of significance.

Ethical Considerations

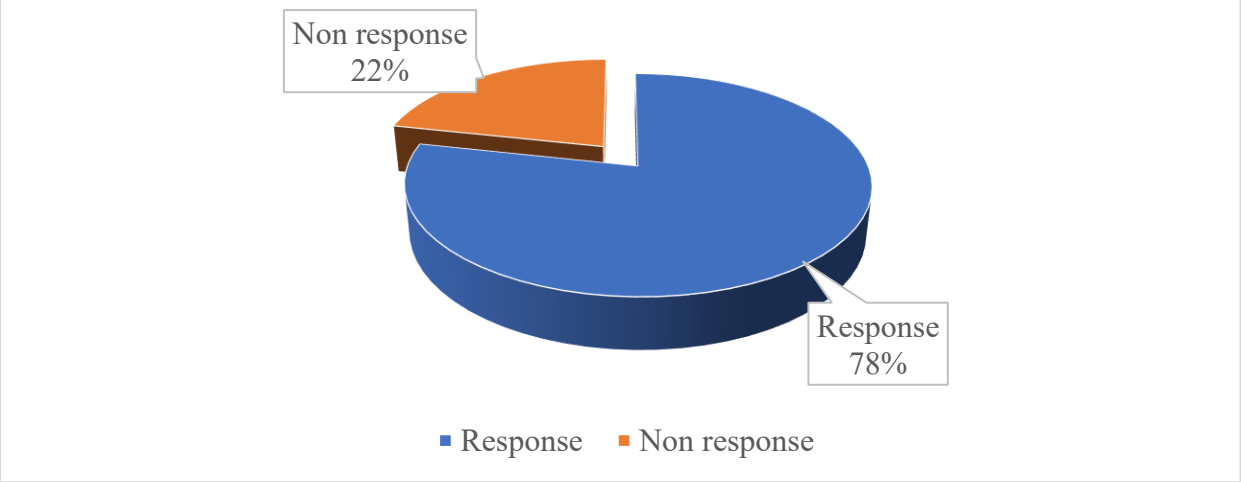
Ethical considerations were considered when carrying out the research. These included informed consent, honesty and privacy. Participants to the research were informed on the purpose of the research and requested to participate. Honesty was observed by the researcher being open with the respondents and not obtaining their responses under false pretence. Privacy was maintained by ensuring anonymity of respondents and no reference was made to company specific information.

Results

Response Rate

The response rate of the study was determined with findings as reported in Figure 1.

Figure 1: Response Rate



Source: Research Data (2026)

Figure 2 suggests that from the 88 questionnaires that were administered to employees in the procurement, supply chain, logistic or operations departments or their equivalents from manufacturing organisations in Mogadishu, 69 were completed and returned. This translates to a response rate of 78%, which was adequate for analysis (Wu, Zhao & Fils-Aime, 2022).

Analysis of General Information

The general information of the respondents who took part in the study was determined and the findings are as reported in Table 2.

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Table 3: Analysis of General Information

Category	Classification	Frequency	Percentage
Gender Distribution	Male	49	71.0
	Female	20	29.0
	Total	69	100.0
Age Categories	21-30 years	9	13.0
	31-40 years	22	31.9
	41-50 years	27	39.1
	Above 50 years	11	15.9
	Total	**69**	**100.0**
Levels of education	Certificate	2	2.9
	Diploma	28	40.6
	Bachelor's degree	30	43.5
	Masters	9	13.0
	Total	**69**	**100.0**
Position held	Chief procurement officer	19	27.5
	Operations officer	17	24.6
	Supply chains manager	23	33.3
	Purchasing and Supplies Officer	10	14.5
	Total	**69**	**100.0**
Years of experience	1-2 years	32	46.4
	3 years and above	37	53.6
	Total	**69**	**100.0**

Source: Research Data (2026)

The findings in Table 3 indicate that while 71.0% of the respondents were male, 29.0% were female. This finding suggests that women are underrepresented in supply chain and procurement roles, particularly in the manufacturing sector in the Federal Republic of Somalia. On age categories, the findings were diverse, with 39.1%, 31.9%, 15.9% and 13.0% being represented by 41-50 years, 31-40 years, above 50 years and 21-30 years. This means that manufacturing sector in Somalia has embraced age diversity, recruiting staff from different age cohorts which brings diverse perspectives. Additionally, findings on education level suggest that most of the respondents were educated, with 43.5% and 40.6% holding Bachelor's degree and diplomas respectively. This means that respondents of the study were learnt and probably could read and interpret the items captured on the questionnaire. The findings on position held by respondents showed that while 33.3% were supply chain managers, 27.5%, 24.6 as well as 14.5% were chief procurement officers, operations managers as well as purchasing and supplies officers respectively. This suggests that respondents of the study were had relevant insights and views to report on supply chain integration by virtue of their experience directly aligned with the topic of the present research. This was further supported by the fact that most of the respondents being 53.6% had accumulated experience of over years in their roles, highlighting the depth of information and insights they reported.

Supplier Management and Organizational Performance

The focus of the second objective was on evaluating the effect of supplier management on organisational performance of manufacturing firms in Mogadishu. In achieving this objective, both descriptive and linear regression analysis were adopted with findings as reported in the subsequent sections.

Descriptive Statistics on Supplier Management

Table 4 provides detailed breakdown of the descriptive statistics on supplier management

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Table 4: Descriptive Statistics on Supplier Management

Statements on information sharing	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Mean	Std. Dev
Supplier evaluation is regularly conducted to determine capability of suppliers in this organisation	2.9%	13%	10.1%	59.4%	14.5%	3.6957	0.97475
Supplier evaluation allow this organisation to evaluate compliance with regulations by suppliers	0%	14.5%	11.6%	59.4%	14.5%	3.7391	0.88537
The organisation has entered into long term partnership with its suppliers	0%	14.5%	10.1%	60.9%	14.5%	3.7536	0.88127
Supplier partnership allows this organisation to respond to unforeseen changes in demand	0%	2.9%	27.5%	55.1%	14.5%	3.8116	0.71281
The organisation closely work with suppliers to meet its specific quality standards	0%	15.9%	8.7%	56.5%	18.8%	3.7826	0.93729
Average score						**3.75652**	**0.8783**

Source: Research Data (2026)

From Table 4, the value of overall mean score is 3.75652 with standard deviation value of 0.8783 which relatively lower than 1. This shows in additional to agreeing that supplier management was conducted by their firms, respondents also shared convergent views and opinions on most items under supplier management. In particular, while 75.4% of the respondents agreed that their organisations had entered into long term partnership with suppliers, 75.3% reported that the organisation closely worked with suppliers to meet specific quality standards and 73.9% reported that supplier evaluation was regularly conducted to determine capability of suppliers. At the same time, while 73.9% of respondents shared that supplier evaluation allowed their organisation to evaluate compliance with regulations by suppliers, 69.6% reported that supplier partnership allowed the organisation to respond to unforeseen changes in demand. Thus, while long term partnership with suppliers received highest rating by respondents, feasibility of these interactions to shape adaptability and agility had least ranking by respondents.

Linear Regression Results Linking Supplier Management and Organizational Performance

Linear regression analysis was performed to establish the effect of supplier management and organizational performance. The findings were determined and presented as shown in Table 7.

Table 5: Linear Regression Results Linking Supplier Management and Organizational Performance

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	3.695	1.235		2.992	.004
Supplier Management	.606	.065	.750	9.268	.000
R=.750	**R^2 =.562**	**Adj. R^2 =.555**		**F=85.888**	**Sig=.000**

Source: Research Data (2026)

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The findings in Table 5 indicate the value of adjusted R square as 0.555, which deduce that 55.5% change in performance of manufacturing organisations in Mogadishu, Somalia can ne accounted for by their supplier management. The fitted regression from Table 7 becomes

$$\mathbf{Y = 3.695+0.606X_2+\varepsilon \ldots\ldots ii}$$

Where:

Y = Organisational performance

X_2 = supplier management

ε = error term

From the results in Table 5, it is clear that a unit enhancement in supplier management other factors kept constant would lead to 0.606-unit improvement in performance of the manufacturing organisations. At 5%, the p-value is given as 0.000, it being less than 0.05 suggests that supplier management has positive and significant effect on organisational performance of the manufacturing organisations in Mogadishu.

Discussion

The findings indicate that supplier management is an important aspect of supply chain integration among manufacturing organizations in Mogadishu, Somalia. Long-term supplier partnerships received the highest rating, while the ability of these relationships to enhance adaptability and agility received the lowest rating. This suggests that although organizations value sustained supplier relationships, their contribution to operational flexibility requires further strengthening. These findings agree with Song and Chen (2021), who emphasize the importance of supplier relationship management in organizational performance. Similarly, Arshad et al. (2022) highlight the importance of supplier relationship management practices in improving performance.

Furthermore, supplier management was identified as a positive and significant driver of organizational performance. This agrees with Ahmad et al. (2021), who examine the influence of supplier-related risks on supply chain performance. Similarly, Kim et al. (2021) associate supplier collaboration with improved product quality, delivery performance, and customer satisfaction. These findings demonstrate the importance of effective supplier management in strengthening organizational performance.

Conclusion

Supplier management is a highly valued aspect of integration among manufacturing organisations in Mogadishu, Somalia. More specifically, while long term partnership with suppliers received highest rating by respondents, feasibility of these interactions to shape adaptability and agility had least ranking by respondents. Additionally, supplier management is indeed a positive and significant driver of organisational performance.

Recommendation

The significance of supplier management in positively shaping performance of manufacturing firms underscores recommendation for supply chain to invest more resources in supplier development. Supply chain managers of the manufacturing firms in Mogadishu should aggressively and proactive intensify long term partnership and collaboration with suppliers in new product development.

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List of abbreviations

CVI – Content Validity Index

R – Correlation coefficient

SD – Standard deviation

SE – Standard error

SPSS – Statistical Package for the Social Sciences

t – t-statistic

F – F-statistic

p – Probability value

ε – Error term

VR – Very relevant

Source of funding

The study received no external funding.

Conflict of interest

The authors declare no conflict of interest

Data availability

Data is available upon request from the author

Author contributions

MAH: conceptualization, methodology, investigation, writing original draft.

MS: data curation, validation, supervision.

Informed consent

Written informed consent was obtained from all participants prior to their inclusion in the study. Participants were informed about the purpose of the study, procedures involved, potential risks and benefits, and their right to withdraw at any time without penalty.

Author biography

Mohamedek Ahmed Mohamud, a student pursuing a master of procurement and logistics management of Team University

Muhamad Ssendagi: research supervisor at Team University.

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