

Supply chain integration and perceived financial performance among managers in cement manufacturing firms in Tororo, Uganda

Okello Eri ¹, Francis kasekende ², Richard Mwirumubi ² and Ogeto Malachi ^{3,*}

¹ Phd student, management science-, Nkumba University, Uganda.

² Professor, management science-, Nkumba University, Uganda.

³ Lecturer, accounting and finance, Kisii University, Kisii, Kenya.

International Journal of Science and Research Archive, 2026, 19(01), 1034-1043

Publication history: Received on 09 March 2026; revised on 19 April 2026; accepted on 22 April 2026

Article DOI: <https://doi.org/10.30574/ijrsra.2026.19.1.0766>

Abstract;

Firms in Tororo, Uganda. It focused on three dimensions of SCI: information sharing, collaborative awareness, and decision synchronization. Guided by Supply Chain Integration Theory and the Resource-Based View (RBV), the study adopted a pragmatic philosophy and a cross-sectional mixed-methods design. Data were collected from senior and middle-level managers using stratified sampling, while key informants were purposively selected. Quantitative data were analyzed descriptively and qualitative data through thematic coding.

The findings revealed that SCI positively influences perceived financial performance by improving coordination, collaboration, and operational efficiency. Among the three dimensions, decision synchronization had the strongest influence. The study concludes that strengthening information-sharing systems, promoting collaboration with supply chain partners, and synchronizing decisions across procurement, production, and distribution can enhance both operational efficiency and financial performance. Treating SCI as a strategic capability is therefore essential for improving outcomes in the cement manufacturing sector.

Keywords: Supply Chain Integration; Perceived Financial Performance; Cement Manufacturing; Uganda

1. Introduction

The performance and sustainability of manufacturing firms increasingly depend on effective coordination and efficiency within supply chains. In highly competitive business environments, organizations must integrate activities among suppliers, manufacturers, distributors, and customers to enhance operational effectiveness and organizational outcomes. Consequently, supply chain integration (SCI) has become an important managerial strategy for improving coordination, collaboration, and information flow among supply chain partners, enabling firms to optimize resources and reduce operational inefficiencies (Seniwoliba et al., 2017).

Supply chain integration refers to the strategic alignment and coordination of key processes across organizational boundaries to achieve efficient and responsive supply chain operations. It is commonly operationalized through practices such as information sharing, collaborative awareness, and decision synchronization. Information sharing allows the timely exchange of critical data such as demand forecasts, production schedules, and inventory levels, thereby reducing uncertainty and improving planning and decision-making (Barigye et al., 2021). Collaborative awareness fosters a shared understanding of goals, processes, and operational challenges among supply chain partners, which enhances joint planning and coordinated activities (Okello-Obura, 2015). Decision synchronization further

* Corresponding author: Ogeto Malachi

strengthens integration by aligning strategic and operational decisions across supply chain actors, improving responsiveness and minimizing redundancies.

Financial performance remains a key indicator of organizational success, reflecting how effectively firms utilize resources to generate profits, maintain competitiveness, and achieve returns on investment (Forth & Bryson, 2019). Previous studies indicate that effective supply chain integration can significantly improve financial outcomes through enhanced coordination, reduced operational costs, and improved decision-making (Seniwoliba et al., 2017; Barigye et al., 2021).

In Uganda, the cement manufacturing sector plays an important role in infrastructure development and economic growth. However, some cement manufacturers in Tororo have experienced operational inefficiencies, rising operational costs, and financial performance challenges partly attributed to inadequate supply chain coordination (Tororo Cement Management Minutes, 2019; PILA Consultants, 2020). Despite efforts to improve communication systems and adopt new technologies, performance improvements have remained limited.

Although supply chain integration is widely recognized as a driver of organizational performance, limited empirical research has examined how specific SCI practices influence perceived financial performance within Uganda's cement manufacturing sector. This study therefore investigates the influence of information sharing, collaborative awareness, and decision synchronization on the perceived financial performance of managerial employees in the cement manufacturing industry in Tororo, Uganda.

General objective

The main purpose of this study was to Examine the role of supply chain integration on perceived financial performance of managerial employees in cement industry in Tororo, Uganda.

Specific objectives

- To establish the effect of Information Sharing on perceived financial performance of managerial employees in cement industry in Tororo, Uganda
- To determine the influence of Collaborative Awareness on perceived financial performance of managerial employees in cement industry in Tororo, Uganda
- To examine the effect of Decision Synchronization on perceived financial performance of managerial employees in cement industry in Tororo, Uganda.

2. Theoretical foundation

2.1. Supply Chain Integration Theory

Supply Chain Integration Theory explains how coordination, collaboration, and alignment among supply chain partners enhance organizational performance. The theory posits that firms achieve greater efficiency, responsiveness, and competitiveness when internal processes are integrated with those of suppliers and customers through mechanisms such as information sharing, joint planning, and coordinated decision-making (Flynn, Huo, & Zhao, 2010; Christopher, 2016). Integrated supply chains enable organizations to respond more effectively to changing market conditions while reducing operational inefficiencies and improving service delivery (Christopher, 2016).

The theory identifies key mechanisms of integration, including information sharing, collaborative awareness, and decision synchronization. Information sharing facilitates the timely exchange of operational data such as demand forecasts, production plans, and inventory levels, thereby reducing uncertainty and improving coordination (Li et al., 2006). Collaborative awareness promotes a shared understanding of goals, processes, and challenges among supply chain partners, which strengthens trust, communication, and joint problem-solving (Simatupang & Sridharan, 2005). Decision synchronization aligns operational and strategic decisions across supply chain actors, ensuring coordinated activities in procurement, production, and distribution, ultimately reducing costs and improving performance (Flynn et al., 2010; Simatupang & Sridharan, 2005). In manufacturing contexts such as the cement industry, effective supply chain integration supports timely raw material supply, efficient production processes, and reliable product distribution, thereby improving operational efficiency and contributing to enhanced financial performance.

2.2. Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory, advanced by Jay Barney (1991), explains that organizations achieve sustainable competitive advantage by effectively utilizing resources that are valuable, rare, inimitable, and non-substitutable (VRIN). Firms that possess and strategically deploy such resources whether tangible assets, knowledge, organizational processes, or relational capabilities are better positioned to achieve superior performance compared to competitors (Barney, 1991; Wernerfelt, 1984).

Within supply chain management, integration capabilities such as advanced information systems, collaborative relationships with supply chain partners, and coordinated decision-making processes can be viewed as strategic organizational resources. These capabilities enable firms to improve coordination, enhance operational efficiency, and support effective decision-making across supply chain networks (Barney, 1991). Through practices such as information sharing, joint planning, and collaborative problem-solving, organizations can leverage both internal and relational resources to improve performance.

In the cement manufacturing sector, effective supply chain integration helps firms minimize production disruptions, strengthen relationships with suppliers and distributors, and improve logistics coordination. Such capabilities enhance resource utilization and operational efficiency, contributing to improved financial outcomes such as higher profitability and better market competitiveness. Consequently, the RBV perspective supports the view that supply chain integration practices represent strategic capabilities that can significantly influence perceived financial performance in manufacturing firms.

2.3. Information Sharing and Perceived Financial Performance

Information sharing is widely recognized as a critical element of supply chain integration that enhances coordination, transparency, and effective decision-making among supply chain partners. Through the exchange of timely and accurate information such as demand forecasts, inventory levels, production schedules, and market trends organizations can improve operational efficiency and reduce uncertainty in supply chain operations. As a result, effective information sharing has been associated with improved organizational and financial performance.

Empirical studies provide considerable evidence supporting this relationship. For instance, Li, Wang, and Chen (2024) examined manufacturing small and medium enterprises in China and found that transparent information exchange among supply chain partners significantly improved financial indicators such as Return on Assets (ROA) and Return on Sales (ROS) by enhancing operational coordination and efficiency. Similarly, Saengchote and Wongkaew (2017), in their study of firms listed on the Stock Exchange of Thailand, established that effective information sharing strengthened firm performance by improving demand forecasting, reducing operational uncertainty, and enhancing supply chain coordination.

In the African context, Achuora and Robert (2022) found that information sharing among supermarkets in Nairobi County significantly improved operational efficiency and service delivery. Their findings suggest that timely communication among supply chain partners helps organizations reduce stock-outs, lower operational costs, and respond more effectively to customer demand. Likewise, Tanaka and Sato (2024) demonstrated that the integration of digital information systems with supply chain processes among Japanese retail firms contributed to improved profitability, highlighting the role of technology in strengthening information-sharing capabilities.

Despite this growing body of evidence, existing studies reveal several limitations. Many have been conducted in developed economies or within sectors such as retail and small and medium enterprises, with limited attention given to heavy manufacturing industries. In addition, some studies focus primarily on operational performance rather than broader financial performance outcomes. Consequently, there remains limited empirical evidence on the relationship between information sharing and perceived financial performance in the cement manufacturing industry, particularly within developing economies such as Uganda.

Therefore, this study seeks to address this research gap by examining the influence of information-sharing practices on perceived financial performance among managerial employees in the cement industry in Tororo, Uganda.

H₁: Information sharing has no significant relationship with perceived financial performance.

2.4. Collaborative Awareness and Perceived Financial Performance

Collaborative awareness refers to the extent to which supply chain partners share knowledge, coordinate activities, and maintain a common understanding of operational processes, market conditions, and strategic objectives. When organizations develop strong collaborative relationships within the supply chain, they improve communication, strengthen trust, and align operational goals among partners. Such collaboration enhances decision-making, improves operational efficiency, and enables organizations to respond more effectively to changes in market demand and supply conditions. Consequently, collaborative awareness is often associated with improved organizational and financial performance.

Empirical studies provide evidence supporting the importance of collaboration in supply chain management. Ojwang and Author (2024), for example, examined collaborative procurement practices among sugar manufacturing firms in Kenya and found that coordination between procurement teams and supply chain partners significantly improved operational efficiency and cost management. The study indicated that collaborative practices contributed to reduced operational costs and improved overall organizational performance. However, the research focused mainly on operational efficiency and cost reduction, with limited emphasis on broader financial performance indicators such as Return on Assets (ROA) or Return on Investment (ROI). In addition, its focus on the sugar manufacturing industry restricts the generalizability of the findings to other industrial sectors.

Similarly, Mensah and Co-author (2023) investigated the influence of collaborative supply chain practices, including strategic supplier partnerships and coordinated inventory management, on organizational performance in Ghana's food and beverage sector. Their quantitative analysis showed that collaborative strategies significantly enhanced firm performance by improving coordination, information exchange, and operational responsiveness. Nevertheless, collaboration was examined as part of a broader strategic framework, making it difficult to isolate the specific impact of collaborative awareness on financial performance. Furthermore, the exclusive reliance on quantitative data limited deeper insights into managerial perceptions and practical implementation challenges.

Additional evidence is provided by Alnahhal, Aylak, Al Hazza, and Sakhrieh (2024), who conducted a systematic review of supply chain collaboration practices across multiple industries. Synthesizing findings from 20 peer-reviewed studies, the review concluded that collaborative awareness among supply chain partners contributes to improved efficiency, reduced operational costs, and enhanced organizational performance. The authors emphasized that effective coordination and information sharing across supply chains can positively influence financial outcomes by reducing uncertainty and improving resource utilization. However, the review also noted that most studies focus primarily on operational performance rather than broader financial indicators.

Further studies in the African context reinforce these findings. Okoro and Team (2016) analyzed supply chain coordination practices among Nigerian conglomerates and found that improved collaboration among supply chain actors significantly enhanced profitability indicators such as Return on Assets (ROA) and Net Profit Margin (NPM). Likewise, Kamara (2021) examined supply chain coordination in a manufacturing firm in Sierra Leone and found that improved coordination enhanced inventory turnover and reduced operational costs, contributing to improved financial performance. Nevertheless, the study was limited to a single firm and relied on a single financial performance indicator, which restricts the generalizability and comprehensiveness of the findings.

Although existing studies suggest that collaborative awareness and coordination among supply chain partners can enhance organizational performance, most of the research has been conducted in different sectors and geographical contexts. Moreover, many studies emphasize operational outcomes rather than financial performance. Consequently, there is limited empirical evidence on how collaborative awareness influences perceived financial performance in the cement manufacturing industry, particularly in developing economies such as Uganda. Therefore, this study seeks to examine the relationship between collaborative awareness and perceived financial performance among managerial employees in the cement industry in Tororo, Uganda.

H₂: Collaborative awareness has no significant relationship with perceived financial performance.

2.5. Decision Synchronization and Perceived Financial Performance

Decision synchronization refers to the extent to which supply chain partners coordinate and align their operational and strategic decisions, including production planning, procurement, inventory management, and distribution activities. Effective synchronization of decisions across supply chain actors enhances coordination, reduces operational inefficiencies, and improves the responsiveness of organizations to market changes. As a result, decision

synchronization is considered an important mechanism through which supply chain integration can contribute to improved financial performance by minimizing operational costs and optimizing resource utilization.

Several empirical studies highlight the importance of synchronized decision-making in enhancing organizational outcomes. Claycomb, Germain, and Dröge (1999) examined the impact of integrated Just-In-Time (JIT) practices across purchasing, production, and selling functions on firm performance in the United States. Using survey data from logistics executives across multiple industries, the study found that synchronized implementation of JIT practices significantly reduced inventory levels and positively influenced financial performance indicators such as return on investment (ROI), profits, and return on sales. The findings suggested that coordinated decision-making across supply chain functions generated stronger financial outcomes compared to isolated operational improvements. However, the study relied primarily on perceptual responses from managers rather than objective financial records, which may limit the reliability of the results.

Similarly, Ahmad, Mehra, and Pletcher (2004) investigated the relationship between JIT practices and firm performance using path analysis. Their results indicated that synchronized operational decisions associated with JIT implementation significantly improved operational efficiency by reducing lead times and inventory levels. Nevertheless, the direct effect of these synchronized practices on financial performance indicators such as profitability and ROI was relatively weak. The authors suggested that improvements in operational performance may mediate the relationship between decision synchronization and financial outcomes. However, the study relied on cross-sectional perceptual data and did not examine the long-term effects of synchronized supply chain decisions.

More recent evidence is provided by Urohman, Suryana, and Pandin (2023), who conducted a meta-analysis of 20 empirical studies examining the impact of JIT practices on organizational performance. Their findings revealed that synchronized decision-making across production and inventory management activities significantly reduced inventory holding costs and improved operational efficiency, which ultimately contributed to increased profitability. Despite these insights, the study did not consider variations across industries, firm sizes, or geographic contexts that may influence the effectiveness of decision synchronization practices.

Additional studies have emphasized the role of coordinated decision-making in improving operational performance within organizations. Abu Zaid, Al-Thani, and Zaid (2017), for instance, examined the interrelationships among JIT production, purchasing, and selling practices in Jordanian manufacturing firms using structural equation modeling. The results indicated that coordinated decisions across supply chain activities enhanced operational performance through improved supplier and customer integration. However, the study did not directly examine financial performance indicators, limiting understanding of how synchronized decisions translate into financial outcomes. Similarly, Gbadamosi, Oladipo, and Adeyemi (2024) found that synchronized operational decisions improved responsiveness, reduced inventory costs, and enhanced service delivery efficiency in Nigerian polytechnics, although the study focused mainly on operational outcomes rather than financial performance indicators.

Although previous studies suggest that synchronized supply chain decisions can significantly enhance organizational performance, much of the existing research has focused primarily on operational outcomes or has been conducted in industries and contexts different from heavy manufacturing. Furthermore, limited empirical research has specifically examined the relationship between decision synchronization and perceived financial performance in the cement manufacturing sector, particularly within developing economies such as Uganda. Therefore, this study seeks to address this gap by examining the relationship between decision synchronization and perceived financial performance among managerial employees in the cement industry in Tororo, Uganda.

H₃: Decision synchronization has no significant relationship with perceived financial performance.

2.6. Supply Chain Integration Practices and Perceived Financial Performance

Supply chain integration practices are widely recognized as key drivers of organizational efficiency and financial performance. By coordinating critical supply chain activities such as inventory management, information sharing, and operational alignment firms can reduce operational costs, improve responsiveness to market demand, and enhance profitability. Effective integration ensures that resources are optimally utilized, processes are streamlined, and supply chain partners are aligned toward common goals, ultimately strengthening overall organizational performance.

Empirical studies support the positive influence of supply chain integration on financial outcomes. Koumanakos (2008) examined the relationship between inventory management efficiency and financial performance among manufacturing firms in Europe. The study found that firms implementing lean inventory strategies characterized by lower inventory

levels relative to sales achieved superior financial performance. Higher inventory turnover was positively associated with gross and net profit margins, while excessive inventory levels led to reduced profitability due to increased holding costs and obsolescence risks. Lean inventory practices were also positively linked to financial indicators such as Return on Assets (ROA) and Return on Equity (ROE). However, the study focused primarily on Greek manufacturing firms in the food, textile, and chemical sectors, limiting the generalizability of its findings to other industries.

Similarly, Naliaka and Namusonge (2015) explored inventory control systems in Kenyan manufacturing firms, emphasizing practices such as Just-In-Time (JIT), Economic Order Quantity (EOQ), and ABC analysis. Their findings indicated that effective inventory control enhanced cost efficiency, operational performance, and product quality. Integration of information technology further improved stock accuracy, reduced lead times, and supported better decision-making, all of which contributed to improved financial performance. Nonetheless, the study was largely based on a single firm, Unga Group Limited, restricting the broader applicability of the results.

Ogbo, Onekanma, and Ukpere (2014) examined inventory management practices in Nigerian small and medium enterprises, using 7Up Bottling Company as a case study. They found that accurate stock records, regular inventory audits, and effective reorder systems reduced stock-outs, improved production continuity, and lowered holding costs, ultimately enhancing profitability. However, the study's focus on a single firm and unclear sampling procedures limit the representativeness of the findings.

Anichebe and Agu (2013) further investigated inventory practices in small Nigerian firms and found that ineffective inventory control contributed to financial instability and operational disruptions, whereas firms with robust inventory systems experienced improved productivity and profitability. Regression analyses revealed a positive relationship between effective inventory management and financial performance, although the study was limited to three firms in Enugu and relied primarily on self-reported practices.

While these studies collectively suggest that supply chain integration practices particularly in inventory management can positively influence financial performance, most research has been conducted in contexts and sectors different from cement manufacturing. Furthermore, many studies emphasize operational outcomes over broader financial indicators, leaving a gap in understanding how integration practices influence perceived financial performance among managers in developing economies.

Given these limitations, this study seeks to examine the relationship between supply chain integration practices and perceived financial performance among managerial employees in the cement industry in Tororo, Uganda.

H₄: Supply chain integration practices have no significant relationship with perceived financial performance.

Based on the above discourse, the authors proposed the following hypothetical model to guide the study.

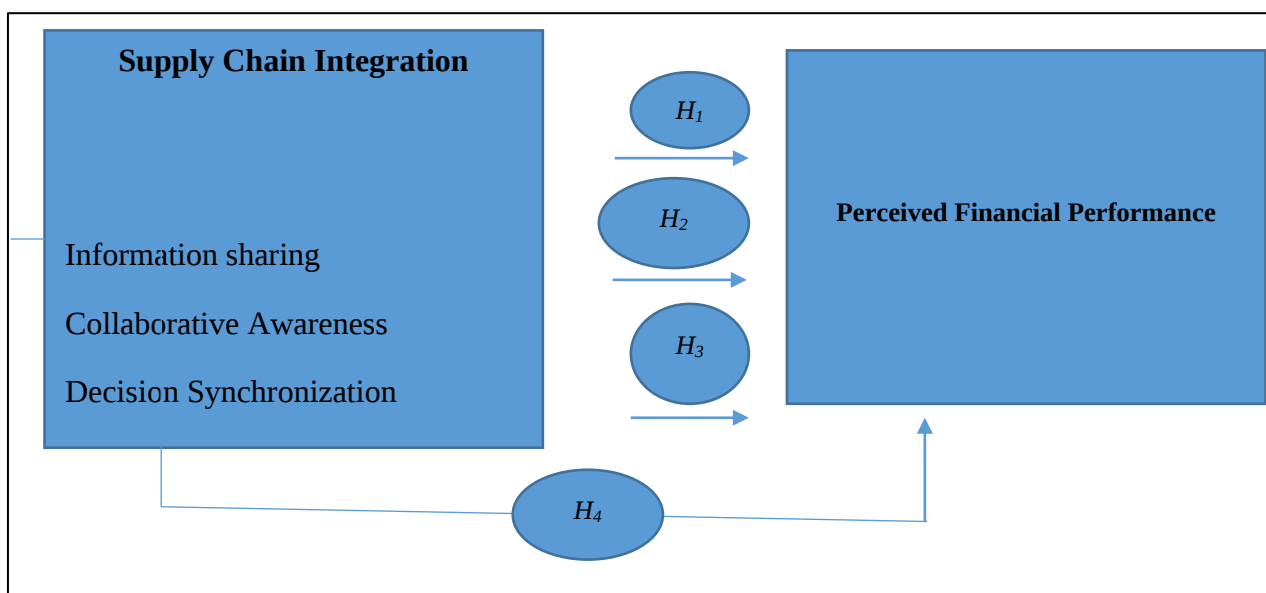


Figure 1 Hypothesized Mode

3. Research Methodology

This study adopted a pragmatic research philosophy, which supports the integration of quantitative and qualitative approaches to address complex organizational research problems (Creswell & Plano Clark, 2018). A cross-sectional research design was used to collect data at a single point in time, enabling the study to capture current perceptions and relationships among the study variables (Bryman, 2016).

The unit of analysis comprised senior and middle-level managers in the cement industry in Tororo, Uganda. Using Slovin's formula, a sample of 140 managers was determined, and stratified sampling was applied to ensure representation across managerial levels (Israel, 2013; Saunders, Lewis, & Thornhill, 2019). In addition, 15 key informants were purposively selected, including senior managers and supply chain specialists, to provide deeper contextual insights (Patton, 2015).

Data were collected using structured questionnaires for quantitative data and semi-structured interviews for qualitative insights (Creswell, 2014). Quantitative data were analyzed using SPSS, employing descriptive statistics, correlation, and regression analysis to examine relationships between variables (Hair et al., 2019). Qualitative data were analyzed using thematic coding to identify recurring patterns and themes and to triangulate the quantitative findings (Braun & Clarke, 2006).

4. Findings of the study

The study investigated the impact of Supply Chain Integration (SCI) on Perceived Financial Performance (PFP). Exploratory Factor Analysis (EFA) revealed three principal dimensions of SCI: Information Sharing (IS), which accounted for 28.72% of the variance; Customer Alignment (CA), contributing 16.39%; and Decision Synchronization (DS), explaining 14.68%. Together, these dimensions captured 59.78% of the total variance, indicating that they robustly represent the core mechanisms through which supply chain integration is operationalized. Similarly, indicators measuring PFP explained 60.46% of the variance, confirming the reliability of the financial performance construct. These results align with prior studies suggesting that supply chain integration is multidimensional, encompassing information flow, collaboration, and coordinated decision-making (Flynn, Huo, & Zhao, 2010; Chen, Paulraj, & Lado, 2004).

Descriptive statistics revealed generally positive perceptions of SCI practices among the surveyed cement manufacturing firms, indicating that coordinated supply chain strategies are actively implemented. This finding corresponds with global evidence that firms adopting integrated supply chain practices report higher operational efficiency and performance outcomes (Li et al., 2024; Tanaka & Sato, 2024).

Correlation analysis demonstrated a strong positive relationship between SCI and PFP ($r = 0.761$, $p < 0.01$), highlighting a statistically significant association. This result supports previous research showing that integrated supply chain practices, particularly information sharing, collaborative awareness, and decision synchronization, are strongly linked to improved financial performance by reducing operational costs, improving responsiveness, and enhancing resource utilization (Christopher, 2016; Barigye et al., 2021).

The regression analysis produced an R^2 value of 0.58, with a standardized coefficient of $\beta = 0.761$ ($p < 0.001$), indicating that SCI explains 58% of the variance in perceived financial performance. This confirms that supply chain integration significantly influences financial outcomes and supports the propositions of Supply Chain Integration Theory and the Resource-Based View (RBV) Theory, which emphasize that coordinated processes and strategic resources contribute to superior firm performance (Barney, 1991; Martin Christopher, 2016).

Among the SCI dimensions, Decision Synchronization ($r = 0.588$) emerged as the most influential factor, underscoring the importance of aligning operational and strategic decisions across supply chain partners. This finding aligns with prior research that highlights decision synchronization as critical for minimizing redundancies, improving responsiveness, and enhancing profitability (Claycomb, Germain, & Dröge, 1999; Ahmad, Mehra, & Pletcher, 2004). Similarly, Information Sharing and Customer Alignment positively contributed to financial performance, reflecting the role of transparent information flow and coordinated stakeholder relationships in improving operational efficiency and profitability (Li et al., 2024; Okoro et al., 2016).

5. Conclusion

This study examined the influence of supply chain integration practices information sharing, collaborative awareness, and decision synchronization on perceived financial performance among managerial employees in the cement industry in Tororo, Uganda. The findings revealed a strong positive relationship between supply chain integration and perceived financial performance. Regression results showed that supply chain integration significantly explains variations in financial performance ($R^2 = 0.58$; $\beta = 0.761$, $p < 0.001$), highlighting its importance in improving organizational outcomes.

The results indicate that information sharing enhances financial performance by improving transparency, coordination, and decision-making across supply chain partners. Collaborative awareness strengthens relationships and fosters a shared understanding of goals and operational challenges, thereby improving coordination in procurement, logistics, and production activities. Decision synchronization emerged as the most influential dimension, as coordinated decisions across supply chain partners help align procurement, production, and distribution processes, reduce redundancies, and improve responsiveness to market demand.

Recommendation

Based on the study findings, several recommendations are proposed to strengthen supply chain integration and improve financial performance in the cement manufacturing industry.

First, firms should strengthen information-sharing systems by investing in modern information and communication technologies that enable real-time data exchange among suppliers, distributors, and internal departments. Improved information flow can enhance transparency, reduce delays, and support more accurate forecasting and planning.

Second, organizations should promote collaborative awareness among supply chain partners through regular communication, joint planning, and strategic partnerships. Strong relationships and shared understanding among supply chain actors can enhance coordination and reduce operational conflicts.

Third, firms should prioritize decision synchronization by aligning procurement, production, inventory, and distribution decisions with key supply chain partners. Establishing integrated planning frameworks and cross-functional coordination mechanisms can improve efficiency and responsiveness.

Fourth, companies should treat supply chain integration as a strategic capability by incorporating it into long-term organizational strategies to enhance competitiveness, reduce operational costs, and improve profitability.

Finally, policymakers and industry regulators should support the adoption of integrated supply chain practices by promoting technological infrastructure, facilitating industry collaboration, and providing training programs to strengthen managerial capabilities in supply chain management.

Compliance with ethical standards

I am deeply grateful to God for the gift of life and good health throughout my academic journey. The successful completion of this postgraduate research report would not have been possible without the support and contribution of many individuals. I wish to express my heartfelt appreciation to my supervisors, Prof Francis Kasekende, and Prof. Richard Mwirumubi PhD, for their unwavering support, constructive feedback, and scholarly guidance throughout this process. I also acknowledge the invaluable contribution of my classmates and colleagues in a special way to Mr. Omwenga Malach, whose cooperation and assistance in sharing relevant information significantly enriched the quality of this research report.

Disclosure of conflict of interest

I declare that this thesis is my original work and has never been submitted to any institution for examination or conferment of a degree or any other qualification. Hence, all rights are reserved. No part of this thesis proposal or information herein may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the author or Kisii University on that behalf.

References

- [1] Abu Zaid, F., Al-Thani, S., & Zaid, A. (2017). Coordinated JIT practices and operational performance in Jordanian manufacturing firms. *International Journal of Production Economics*, 193, 45–57.
- [2] Achoura, P., & Robert, K. (2022). Supply chain information sharing and operational efficiency: Evidence from supermarkets in Nairobi County. *African Journal of Business Management*, 16(4), 101–115.
- [3] Ahmad, S., Mehra, S., & Pletcher, R. (2004). Just-in-time practices and firm performance: Evidence from US manufacturing firms. *Journal of Operations Management*, 22(6), 693–712.
- [4] Alnahhal, M., Aylak, S., Al Hazza, H., & Sakhrieh, A. (2024). Supply chain collaboration: A systematic review of practices and outcomes. *Journal of Supply Chain Management Research*, 9(1), 15–40.
- [5] Barigye, H., Malinga, C., & Okello, D. (2021). *The impact of supply chain integration on organizational performance: Evidence from manufacturing firms in East Africa*. Kampala: Makerere University Press.
- [6] Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- [7] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- [8] Bryman, A. (2016). *Social research methods* (5th ed.). Oxford, UK: Oxford University Press.
- [9] Chen, I. J., Paulraj, A., & Lado, A. (2004). Strategic purchasing, supply management, and firm performance. *Journal of Operations Management*, 22(5), 505–523.
- [10] Christopher, M. (2016). *Logistics & supply chain management* (5th ed.). Harlow, UK: Pearson Education.
- [11] Claycomb, C., Germain, R., & Dröge, C. (1999). The effects of just-in-time and supply chain integration on financial performance. *Journal of Supply Chain Management*, 35(3), 33–41.
- [12] Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- [13] Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- [14] Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660–679.
- [15] Flynn, B. B., Huo, B., & Zhao, X. (2010). The impact of supply chain integration on performance: A contingency and configuration approach. *Journal of Operations Management*, 28(1), 58–71.
- [16] Forth, J., & Bryson, A. (2019). *Organizational performance and financial outcomes: A contemporary perspective*. London: Routledge.
- [17] Gbadamosi, S., Oladipo, O., & Adeyemi, T. (2024). Synchronized operational decisions and service delivery efficiency in Nigerian polytechnics. *African Journal of Management Studies*, 12(2), 77–92.
- [18] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Andover, UK: Cengage Learning.
- [19] Israel, G. D. (2013). *Determining sample size*. Gainesville, FL: University of Florida IFAS Extension.
- [20] Kamara, S. (2021). Supply chain coordination and financial performance in Sierra Leonean manufacturing. *Journal of African Business*, 22(1), 55–73.
- [21] Koumanakos, D. (2008). The effect of inventory management on firm performance. *International Journal of Productivity and Performance Management*, 57(5), 355–369.
- [22] Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Rao, S. S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*, 34(2), 107–124.
- [23] Li, X., Wang, Y., & Chen, J. (2024). Information sharing and financial performance of SMEs in China. *Asia-Pacific Journal of Business Research*, 15(2), 87–105.
- [24] Mensah, P., & Co-author, J. (2023). Collaborative supply chain practices and organizational performance in Ghana's food and beverage sector. *African Journal of Economic and Management Studies*, 14(3), 210–225.

- [25] Naliaka, J., & Namusonge, G. (2015). Inventory control systems and performance of Kenyan manufacturing firms. *International Journal of Economics, Commerce and Management*, 3(9), 1–18.
- [26] Ogbo, A., Onekanma, A., & Ukpere, W. (2014). Inventory management practices in Nigerian SMEs: A case of 7Up Bottling Company. *African Journal of Business Management*, 8(14), 607–617.
- [27] Ojwang, P., & Author, L. (2024). Collaborative procurement practices in Kenya's sugar industry. *Journal of Supply Chain Management in Africa*, 10(1), 33–49.
- [28] Okello-Obura, C. (2015). Supply chain collaboration and performance of manufacturing firms in Uganda. *African Journal of Business Management*, 9(22), 658–670. <https://doi.org/10.5897/AJBM2015.7710>
- [29] Okoro, S., & Team, A. (2016). Supply chain coordination and profitability in Nigerian conglomerates. *Nigerian Journal of Management Research*, 8(2), 50–68.
- [30] Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- [31] PILA Consultants. (2020). *Operational efficiency assessment report: Cement manufacturing sector, Uganda*. Kampala, Uganda: PILA Consultants.
- [32] Saengchote, N., & Wongkaew, S. (2017). Information sharing and firm performance: Evidence from the Stock Exchange of Thailand. *Asian Journal of Management Science*, 5(1), 22–38.
- [33] Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Harlow, UK: Pearson Education.
- [34] Seniwoliba, J., Amankwah-Amoah, J., & Kyeremeh, J. (2017). Supply chain integration and performance of manufacturing firms in Sub-Saharan Africa. *Journal of Business Research*, 78, 180–190.
- [35] Simatupang, T. M., & Sridharan, R. (2005). An integrative framework for supply chain collaboration. *The International Journal of Logistics Management*, 16(2), 257–274.
- [36] Tanaka, H., & Sato, K. (2024). Digital information systems and profitability in Japanese retail firms. *International Journal of Logistics Management*, 35(1), 88–105.
- [37] Tororo Cement Management Minutes. (2019). *Quarterly performance and operations review*. Tororo, Uganda: Tororo Cement Limited.
- [38] Urohman, A., Suryana, A., & Pandin, R. (2023). Meta-analysis of JIT practices and organizational performance. *Journal of Manufacturing Systems*, 65, 102–120.
- [39] Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.