



Strategic Antecedents of Sustainable Procurement: The Synergistic Impact of Supplier Relationship Management, Digital Transformation, and Ethical Sourcing

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ABSTRACT

In contemporary global markets, the strategic integration of procurement and logistics is essential for enhancing supply chain efficiency, mitigating operational risks, and ensuring environmental sustainability. Despite its importance, achieving seamless synchronization remains challenging, requiring a nuanced approach to supplier selection, cost control, and green logistics. This conceptual paper addresses these operational hurdles by developing a comprehensive theoretical framework that identifies the primary strategic drivers of sustainable procurement efficacy. Drawing upon a synthesis of existing literature, the study proposes a structural model comprising three critical strategic antecedents: Supplier Relationship Management (SRM), Digital Transformation, and Ethical Sourcing. The paper formulates three testable propositions (P1–P3), positing that cultivating collaborative, long-term supplier partnerships, leveraging advanced digital technologies for data-driven decision-making, and prioritizing stringent ethical and social responsibility standards directly enhance procurement performance and sustainable supply chain outcomes. Theoretically, this research advances the supply chain management discourse by transitioning from generalized best practices to a specific, testable model, providing a clear pathway for future empirical investigation. Managerially, the proposed tri-pillar framework offers a strategic blueprint for organizations to absorb market shocks, optimize overarching logistical expenditures, and meet escalating regulatory and consumer demands for corporate social responsibility. Ultimately, this article establishes that integrating relational capabilities, digital innovation, and ethical commitments is vital for long-term, sustainable procurement success.

INTRODUCTION

In contemporary global markets, the strategic integration of procurement and logistics functions has emerged as a cornerstone for enhancing supply chain efficiency. While procurement governs the strategic sourcing and acquisition of commodities, logistics manages their physical transit, storage, and delivery[1]. Effectively aligning these two domains allows organizations to optimize the intricate dynamics of inbound, outbound, and reverse logistics, which directly influences cost management and customer satisfaction. However, achieving this synchronization forces organizations to navigate significant challenges, including balancing cost-effectiveness against quality benchmarks, managing volatile supplier risks, and ensuring precise temporal coordination[2], [3]. To address these operational hurdles, the adoption of modern digital tools, such as specialized procurement software, has become increasingly vital for improving visibility and overall operational effectiveness.

The significance of this integration within the logistics and transportation sectors cannot be understated, as it exercises a direct impact on cost efficiency, operational continuity, risk mitigation, and environmental sustainability. Synthesizing quality sourcing with robust transportation networks guarantees timely deliveries that support continuous production while minimizing supply chain disruptions. Financially, strategic procurement logistics drives cost efficiency by facilitating bulk purchasing, competitive supplier contracting, and optimized route planning, which lowers transportation and warehousing expenses while leveraging economies of scale [2], [4], [5]. Operationally, this interface enhances performance, reliability, and agility; enhanced coordination among suppliers, carriers, and distribution hubs enables precise inventory control, supports just-in-time delivery frameworks, and shortens lead times. Finally, robust procurement logistics builds



resilience against systemic vulnerabilities—such as supplier defaults, delivery delays, and quality variances—by deploying risk mitigation strategies like supplier diversification, strategic safety stocks, and predictive analytics. Ultimately, coupling procurement data with logistical execution provides the transparency and agility required to absorb market shocks, reduce operational costs, and preserve customer satisfaction.

LITERATURE REVIEW

The article clearly emphasises the importance of integrating procurement and logistics for supply chain efficiency, and it is agreed that aligning these processes can lead to cost savings, improved operational performance, and more sustainability. It correctly recognises major concerns, such as supplier risks and coordination weaknesses, while emphasising the value of technology. However, the text implies that solutions are universally applicable, without addressing individual sector nuances or regional limits [2], [4], [6]. Furthermore, although it emphasises sustainability, it might look into novel green logistics solutions to bridge this gap completely. This is how we can apply supplier selection, cost control, and sustainability into this discussion.

Firstly, supplier selection. The article emphasises the important aspect of selecting suppliers based on their dependability, quality, and cost-effectiveness [3], [7]. A strategic strategy includes evaluating suppliers' ability to meet delivery deadlines, maintain quality standards, and provide competitive price. Furthermore, procurement teams should cultivate good connections with suppliers in order to negotiate better terms and collaborate [4], [7], as well as to ensure that any logistical issues are resolved quickly. By carefully selecting suppliers, businesses can reduce risks and streamline logistical operations, resulting in cost savings and enhanced supply chain efficiency.

Secondly, cost control. Cost control is achieved by optimising procurement logistics through strategic supplier selection, bulk purchase, and waste minimisation during transportation and storage [8], [9]. Companies may negotiate better agreements with suppliers, manage inventory levels more efficiently, and cut transportation costs by optimising routes. These steps help to reduce total supply chain costs, increase efficiency, and improve financial sustainability. Effective cost control ensures that procurement and logistics integrate seamlessly, resulting in increased profitability and resource utilisation. By monitoring and optimizing purchasing practices, businesses can reduce unnecessary expenditures, negotiate better prices, and avoid overstocking or stockouts.

Sustainability in procurement logistics refers to acquiring products and managing logistics with a low environmental impact [10], [11]. It entails sourcing environmentally friendly suppliers, optimising transportation routes to cut emissions, and including reverse logistics for recycling and trash disposal. Companies that integrate their procurement strategy with sustainability goals can lower their carbon footprint, minimise waste, and create long-term financial and environmental value. This method promotes corporate social responsibility while also fulfilling increasing consumer and regulatory demands for ecologically friendly activities.

If procurement fails to manage supplier selection, cost control, and sustainability, it can have a number of negative consequences [5], [12]. Poor supplier selection can lead to unpredictable

deliveries and lower quality, raising operating risks and expenses. Ineffective cost control can result in waste, inefficiencies, and lower profitability, whereas ignoring sustainability can affect the company's brand, incur regulatory penalties, and contribute to environmental damage. Finally, these errors interrupt supply chain activities, reducing competitive advantage and jeopardising long-term corporate viability.

Proposition and Model Development

This paragraph develops three constructs Supplier Relationship Management (SRM), Digital Transformation in Procurement, and Ethical Sourcing as strategic antecedents of procurement performance and sustainability. It defines each construct in precise, scholarly terms, links them to procurement effectiveness and sustainable supply chain outcomes, and presents three testable propositions (P1–P3). Finally, it describes a conceptual model wherein SRM, digital transformation, and ethical sourcing are independent variables influencing procurement performance (the dependent variable).

Supplier Relationship Management (SRM)

Supplier Relationship Management (SRM) is identified as a key antecedent influencing procurement effectiveness and supply chain performance [7]. SRM refers to a strategic approach that focuses on developing collaborative, long-term relationships with suppliers to enhance value creation, operational efficiency, and competitive advantage. SRM is characterized by clear contractual agreements, proactive communication, continuous performance monitoring, and mutual trust between buyers and suppliers [13], [14]. Well-defined terms and conditions establish expectations regarding quality standards, delivery performance, and regulatory compliance, thereby reducing uncertainty and operational disruptions. Furthermore, ongoing communication and data-driven supplier evaluations facilitate stronger collaboration and enable organizations to identify and address supplier-related risks proactively. Beyond operational outcomes, SRM also incorporates environmental and social responsibility considerations into supplier assessments, ensuring alignment with corporate sustainability objectives. Therefore, SRM can be conceptualized as a strategic procurement capability that enhances supply chain resilience, supplier performance, and sustainable procurement outcomes.

Proposition 1 (P1): Supplier Relationship Management positively influences procurement performance and sustainable supply chain outcomes.

Digital Transformation

Digital Transformation in Procurement refers to the integration of advanced digital technologies (such as AI, data analytics, blockchain, and cloud platforms) into procurement processes to improve efficiency, visibility, and decision-making [4], [15], [16]. Digital tools automate routine tasks, enable real-time data sharing, and provide analytical insights, thereby streamlining operations and increasing supply chain agility. For example, predictive analytics can forecast demand and manage risks, while blockchain ensures transparency in sourcing. Empirical studies and industry reports note that digital procurement leads to faster decision-making and supply chain resilience, which in turn boost procurement performance and sustainability.

Proposition 2 (P2): Digital transformation in procurement positively influences procurement performance and sustainability.

Ethical Sourcing

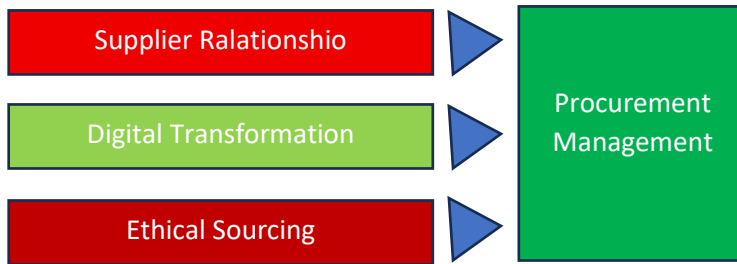
Ethical Sourcing is defined as procuring materials and services in a way that prioritises ethical and social responsibility, beyond minimum legal requirements [17]. It incorporates labour standards (fair wages, no child or forced labour), environmental stewardship, and supplier transparency into sourcing decisions. Ethical sourcing aligns supplier practices with corporate social responsibility goals, ensuring that social and environmental criteria drive procurement choices. Research indicates that ethical procurement practices correlate with higher supply chain efficiency and reputational benefits [18]–[21]. Hence, prioritising ethics in sourcing is posited to improve sustainable procurement outcomes.

Proposition 3 (P3): Ethical sourcing positively influences procurement performance and sustainable outcomes.

Drawing upon the theoretical arguments and the three formulated propositions (P1–P3), the following conceptual model is developed to empirically investigate the strategic drivers of procurement efficacy. Within this proposed framework, Supplier Relationship Management (SRM), digital transformation, and ethical sourcing are conceptualized as the primary independent variables.

These three strategic antecedents are hypothesized to exert a direct, positive influence on the dependent variables, specifically procurement performance and sustainable supply chain outcomes. Ultimately, this structural model provides a comprehensive and testable foundation for analyzing how relational capabilities, technological integration, and ethical commitments collectively interact to determine sustainable procurement success.

Figure 1 Conceptual Model



In summary, the proposed conceptual model establishes Supplier Relationship Management (SRM), digital transformation, and ethical sourcing as critical strategic antecedents that collectively drive procurement performance and sustainability. By cultivating collaborative supplier partnerships, leveraging advanced technologies for data-driven decision-making, and adhering to high standards of social and environmental responsibility, organizations can significantly enhance both operational efficiency and supply chain resilience. Ultimately, the three propositions (P1–P3) posited in this section outline a clear, testable framework demonstrating that integrating relationship-building, digital innovation, and ethical practices is essential for achieving long-term, sustainable procurement success.

CONCLUSION

In contemporary global markets, the seamless integration of procurement and logistics is a foundational requirement for supply chain resilience and operational efficiency. Addressing the complex challenges of supplier risks, stringent cost controls, and environmental sustainability, this research developed a robust conceptual framework aimed at optimizing procurement efficacy. By synthesizing existing literature and addressing operational vulnerabilities, the study establishes a testable structural model that posits three critical strategic antecedents as primary drivers of procurement performance and sustainable supply chain outcomes. Specifically, the framework argues that cultivating long-term **Supplier Relationship Management (SRM)**, integrating advanced technologies for **Digital Transformation**, and prioritizing **Ethical Sourcing** beyond minimum legal compliance collectively form the cornerstone of a modern, highly effective procurement strategy.

The managerial and theoretical implications of this framework are substantial; neglecting these strategic pillars exposes organizations to severe operational disruptions, financial inefficiencies, and reputational damage. Conversely, proactively adopting this tri-pillar model enables businesses to absorb market shocks, reduce overarching logistical expenditures, and fulfill escalating regulatory and consumer demands for corporate social responsibility. Theoretically, this paper advances the supply chain management discourse by transitioning from generalized best practices to a specific, empirical pathway. Moving forward, future research must focus on empirically validating the three formulated propositions (P1–P3) across diverse regional contexts and distinct industry sectors, thereby solidifying the imperative of merging relational capabilities, digital innovation, and ethical commitments in achieving long-term sustainable procurement success.

REFERENCES

1. P. M. da S. Schiffini, I. S. Rampasso, T. F. A. C. Sigahi, G. H. S. M. de Moraes, and R. Anholon, "Sustainable procurement in higher education institutions: a Fuzzy TOPSIS approach for hierarchization of barriers," *Int. J. Sustain. High. Educ.*, 2025, doi: 10.1108/IJSHE-07-2024-0483.
2. H. Thies and K. Stanoevska-Slabeva, "Critical success factors for sustainable business networks," *18th Am. Conf. Inf. Syst. 2012, AMCIS 2012*, vol. 6, no. July, pp. 4322–4332, 2012.
3. E. Peters, L. Knight, K. Boersma, and N. Uenk, "Organizing for supply chain resilience: a high reliability network perspective," *Int. J. Oper. Prod. Manag.*, vol. 43, no. 1, pp. 48–69, 2023, doi: 10.1108/IJOPM-03-2022-0167.
4. E. Karttunen, K. Lintukangas, and J. Hallikas, "Digital transformation of the purchasing and supply management process," *Int. J. Phys. Distrib. Logist. Manag.*, vol. 53, no. 5–6, pp. 685–706, 2023, doi: 10.1108/IJPDLM-06-2022-0199.
5. M. C. Georgiadou, "An overview of benefits and challenges of building information modelling (BIM)



- adoption in UK residential projects,” *Constr. Innov.*, vol. 19, no. 3, pp. 298–320, 2019, doi: 10.1108/CI-04-2017-0030.
6. P. Kouvelis, L. Dong, O. Boyabatli, and R. Li, *The Handbook of Integrated Risk Management in Global Supply Chains*. 2011. doi: 10.1002/9781118115800.
 7. Yang Liu, Q. Zhu, and S. Seuring, “Linking capabilities to green operations strategies: The moderating role of corporate environmental proactivity,” *Int. J. Prod. Econ.*, vol. 187, no. December 2015, pp. 182–195, 2017, doi: 10.1016/j.ijpe.2017.03.007.
 8. H. M. Wee and S. Wu, “Lean supply chain and its effect on product cost and quality: a case study on Ford Motor Company,” *Supply Chain Manag. An Int. J.*, vol. 14, no. 5, pp. 335–341, 2009, doi: 10.1108/13598540910980242.
 9. R. Dubey, A. Gunasekaran, S. J. Childe, T. Papadopoulos, and P. Helo, “Supplier relationship management for circular economy: Influence of external pressures and top management commitment,” *Manag. Decis.*, vol. 57, no. 4, pp. 767–790, 2019, doi: 10.1108/MD-04-2018-0396.
 10. S. K. A. Cheah and B. Low, “The impact of public policy marketing, institutional narratives and discourses on renewable energy consumption in a developing economy,” *Asia Pacific J. Mark. Logist.*, vol. 34, no. 5, pp. 944–962, 2022, doi: 10.1108/APJML-11-2020-0835.
 11. V. K. Mittal and K. S. Sangwan, “Development of a structural model of environmentally conscious manufacturing drivers,” *J. Manuf. Technol. Manag.*, vol. 28, no. 8, pp. 1195–1208, 2014, doi: 10.1080/00207543.2013.838649.
 12. T. Jambulingam and R. Kathuria, “Antecedents to buyer-supplier coordination in the pharmaceutical supply chain,” *Int. J. Pharm. Healthc. Mark.*, vol. 14, no. 2, pp. 289–303, Apr. 2020, doi: 10.1108/IJPHM-08-2019-0058.
 13. J. D. Wisner, “A Structural Equation Model of Supply Chain Management Strategies and Firm Performance,” *J. Bus. Logist.*, vol. 24, no. 1, pp. 1–26, 2003, doi: 10.1002/j.2158-1592.2003.tb00030.x.
 14. A. Beatriz Lopes de Sousa Jabbour, J. Carlos Omodei Junior, and C. José Chiappetta Jabbour, “Extending lean manufacturing in supply chains: a successful case in Brazil,” *Benchmarking An Int. J.*, vol. 21, no. 6, pp. 1070–1083, 2014, doi: 10.1108/BIJ-01-2013-0014.
 15. L. Lao, Z. Li, S. Hou, B. Xiao, S. Guo, and Y. Yang, “A survey of IoT applications in blockchain systems: Architecture, consensus, and traffic modeling,” *ACM Computing Surveys*, vol. 53, no. 1. 2020. doi: 10.1145/3372136.
 16. B. Ocicka, “How a Digital Platform Transforms the Value Proposition in Purchasing and Buyer-Supplier Relationship Management,” *Eur. Res. Stud. J.*, vol. XXIV, no. Issue 4, pp. 44–56, 2021, doi: 10.35808/ersj/2561.
 17. G. Svensson and H. Bååth, “Supply chain management ethics: conceptual framework and illustration,” *Supply Chain Manag. An Int. J.*, vol. 13, no. 6, pp. 398–405, 2008, doi: 10.1108/13598540810905651.
 18. R. Joshi, D. K. Banwet, and R. Shankar, “A Delphi-AHP-TOPSIS based benchmarking framework for performance improvement of a cold chain,” *Expert Syst. Appl.*, vol. 38, no. 8, pp. 10170–10182, 2011, doi: 10.1016/j.eswa.2011.02.072.
 19. R. Joshi, D. K. Banwet, R. Shankar, and J. Gandhi, “Performance improvement of cold chain in an emerging economy,” *Prod. Plan. Control*, vol. 23, no. 10–11, pp. 817–836, 2012, doi: 10.1080/09537287.2011.642187.
 20. N. N. Abd Rahim, M. Z. Abu Bakar, A. A. Muhamed, M. Mat Halif, and M. F. Hassan, “The Relationship Between Marketing Mix and Customer Loyalty among Malaysian Smartphone Users,” *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 12, no. 1, pp. 2270–2276, 2022, doi: 10.6007/ijarbss/v12-i1/12196.
 21. A. A. Muhamed, N. Salim, M. N. Ab Rahman, F. M. Hamzah, and M. H. Ali, “Effects of supply chain orientation on firm performance: insights from a Malaysian case study of halal-certified small and medium-sized enterprises,” *J. Small Bus. Entrep.*, vol. 0, no. 0, pp. 1–17, Dec. 2020, doi: 10.1080/08276331.2020.1848328.