Knowledge seeking and green supply chain management: The mediating role of green self-efficacy

Arif Prihasalma Roichnanti

Universitas Pembangunan Nasional Veteran Yogyakarta, Indonesia
arifprihasalma1@gmail.com

ARTICLE INFO	ABSTRACT
	Purpose-This study aims to examine the effect of knowledge seeking on green supply chain management and to investigate the mediating role of green self-efficacy. Although prior studies emphasize the importance of knowledge-related activities in promoting sustainable practices, empirical findings remain inconclusive regarding how such activities are translated into green supply chain implementation. Furthermore, prior research has largely overlooked the influence of internal cognitive factors in explaining this relationship. **Methodology-**This study adopted a quantitative research design and utilized a survey-based data collection method. The respondents consisted of owners and managers of manufacturing micro, small, and medium enterprises located in Yogyakarta, Indonesia selected through purposive sampling. The research instruments were developed by adapting established measurement scales from previous studies and were evaluated using a Likert-type scale. The collected data were analyzed through partial least squares–structural equation modeling using SmartPLS version 4 to assess the measurement model and examine the proposed hypotheses. **Findings-**The findings reveal that green self-efficacy exerts a positive and statistically significant influence on green supply chain management. In contrast, knowledge seeking shows no significant direct impact on green supply chain management and does not significantly affect green self-efficacy. As a result, green self-efficacy fails to function as a mediating variable in the relationship between knowledge seeking and green supply chain management. **Research Limitations-**This research is constrained by a cross-sectional research design, which limits the examination of temporal dynamics and reduces the ability to draw strong causal inferences among the studied variables. In addition, the use of self-reported data may introduce response bias, as perceived practices may differ from actual green supply chain implementation. Finally, the focus on manufacturing micro, small, and medium enterprises within a single regional context may limit the generalizability of the findings to other sectors or geographical settings. **Novelty-**This study offers novel insights by demonstrating that green self-efficacy plays a more decisive role than knowledge seeking in driving green supply chain management adoption. By integrating social cognitive theory into green supply chain research, this study challenges the assumption that knowledge acquisition automatically leads to sustainable practices and highlights the importance of internal cognitive readiness in sustainability-oriented decision-making, particularly in resource-constrained organizational contexts.

1. Introduction

Increasing attention to sustainability issues has encouraged organizations to integrate environmentally friendly principles into their business activities, particularly in supply chains that have significant environmental impacts (Khandare, 2024). Green supply chain management represents a strategic orientation focused on reducing environmental impacts by integrating environmental considerations into raw material selection, production activities, distribution processes, and collaboration with suppliers and customers (Chandrasiri, 2025). The existing literature highlights the manufacturing sector as particularly significant, given its high resource consumption and contribution to waste generation and emissions (Sheng et al., 2023). Accordingly, the implementation of green supply chain management is increasingly recognized not only as a response to environmental concerns but also as a strategic tool for improving operational efficiency and strengthening long-term organizational sustainability.

From a theoretical perspective, this study is grounded in the knowledge-based view (KBV) theory and social cognitive theory (SCT). The KBV posits that knowledge is a strategic resource that enables organizations to develop capabilities and achieve competitive advantages through learning and innovation (Grant, 1996). In the context of sustainability, knowledge acquisition allows organizations to understand green technology, environmental regulations, and sustainable operational practices. However, the KBV has been criticized for its implicit assumption that the possession of knowledge will automatically translate into organizational action without sufficiently considering the internal cognitive and behavioral mechanisms that shape implementation outcomes. To address this limitation, SCT provides a complementary perspective by emphasizing the role of self-efficacy beliefs about one's capabilities in influencing behavior, persistence, and strategic action (Bandura, 1999). Integrating these two theories enables a more comprehensive explanation of how externally acquired knowledge can be transformed into green supply chain practices.

Within this framework, knowledge seeking is recognized as a critical organizational activity that reflects deliberate efforts to acquire knowledge from external sources, such as training programs, mentoring initiatives, business networks, and governmental institutions (Veeravalli et al., 2020; Zhang et al., 2023). Through knowledge seeking, organizations enhance their understanding of environmentally friendly production technologies, waste management systems, and sustainability standards relevant to their industry contexts (Chatzoudes & Chatzoglou, 2023). Prior studies suggest that knowledge seeking supports organizational learning and strategic decision-making, particularly in environments characterized by rapid regulatory and market-driven sustainability pressures (Khalil & Ghadiri, 2025). Accordingly, knowledge seeking is often assumed to be a prerequisite for adopting supply chain supply chain management.

Nevertheless, emerging evidence suggests that the successful implementation of green supply chain management is not determined solely by the availability of knowledge. Instead, it also depends on the organization's confidence in its ability to apply this knowledge in practice (Khan et al., 2024). Green self-efficacy reflects an organization's belief in its capacity to design, manage, and implement environmentally oriented business activities (Lili & Rafiq, 2025). Drawing on SCT, organizations with higher levels of green self-efficacy are more likely to persist in the face of uncertainty, manage risks associated with green innovation, and proactively integrate sustainability principles into supply chain management (Alshebami, 2023; Alam et al., 2024). Thus, green self-efficacy is theoretically positioned as a potential mediating mechanism that explains why knowledge seeking may or may not lead to effective green supply chain management implementation.

Yogyakarta, Indonesia was selected as the research context because it represents one of Indonesia's regions with a substantial concentration of manufacturing micro, small, and medium enterprises (MSMEs), totaling approximately 329,487 units in 2025 across various small and medium-scale industrial subsectors, according to data from the Yogyakarta Cooperative and SME Office. Beyond its statistical significance, Yogyakarta is recognized as a regional cluster characterized by dense local supply networks, strong institutional support, and close collaboration among MSMEs, universities, government agencies, and community-based

business networks, which intensifies access to training, mentoring, and external knowledge sources (Cornellia et al., 2025). These conditions indicate a relatively high intensity of knowledge-seeking activity among business actors. However, prior studies have also highlighted that regions dominated by small-scale manufacturing frequently face difficulties in translating acquired knowledge into systematic sustainability practices due to limited internal capabilities, resource constraints, and risk aversion. This makes Yogyakarta a theoretically relevant context for examining the relationship between knowledge seeking and the adoption of green supply chain management.

Despite the growing body of literature on sustainability in MSMEs, several research gaps persist. Existing studies tend to emphasize the direct effects of green practices on business performance or focus primarily on green innovation, while research explicitly examining the link between knowledge seeking and green supply chain management remains limited and empirically inconclusive (Baeshen et al., 2021; Gidage & Bhide, 2025). Moreover, prior research has largely relied on resource- or knowledge-based explanations, with relatively little attention given to organizational cognitive mechanisms, such as green self-efficacy, that influence sustainability-oriented decision-making. From a practical perspective, sustainability initiatives continue to prioritize training and knowledge dissemination, despite mixed evidence regarding their effectiveness in driving actual green supply chain practices. Addressing these gaps, this study examines the effect of knowledge seeking on green supply chain management with green self-efficacy as a mediating variable in manufacturing MSMEs in Yogyakarta, Indonesia, integrating the KBV and SCT to provide a more nuanced explanation of green supply chain adoption.

2. Literature Review and Hypothesis Development

Within the KBV framework, knowledge is regarded as a critical organizational asset that supports the development of both operational and strategic capabilities, including those related to supply chain management (Grant, 1996). Knowledge seeking represents an organization's deliberate effort to acquire and assimilate external knowledge to respond to environmental uncertainty and enhance decision-making quality (Tomé & Gromova, 2021). Through activities such as training participation, collaboration with external partners, and engagement with institutional networks, organizations can access knowledge related to environmentally friendly materials, cleaner production technologies and sustainable logistics practices (Bloodgood & Chen, 2022; Bhowmick et al., 2025). Logically, the knowledge obtained through these processes can be translated into concrete supply chain decisions, such as selecting green suppliers, optimizing production processes to reduce waste, and adopting environmentally friendly packaging solutions (Al-Masri & Wimanda 2024). Empirical studies support this argument by demonstrating that organizations actively engaged in knowledge-seeking activities are more likely to adopt environmental management and sustainability-oriented practices (Polas et al., 2023; Zhang et al., 2023). **H₁: Knowledge Seeking Has a Positive Effect on Green Supply Chain Management.**

Beyond its operational implications, knowledge seeking influences internal cognitive and psychological processes within organizations. Knowledge acquired through interaction with external actors enhances not only technical understanding but also learning experiences that shape confidence in performing specific tasks (Ibojo & Mobolade, 2023; Zerlinda et al., 2025). According to the SCT, mastery experiences and learning outcomes are the primary sources of self-efficacy formation (Bandura, 1999). When organizations repeatedly acquire and internalize new knowledge, they develop stronger beliefs in their ability to execute complex activities. In the sustainability context, knowledge related to green technologies, environmental standards, and waste management practices can strengthen confidence in implementing environmentally friendly initiatives (Acintya et al., 2022). Prior empirical studies have indicated that active knowledge seeking positively contributes to the development of green self-efficacy by enhancing skills, experience, and perceived competence in sustainability-

related activities (Nair et al., 2021; Zhang et al., 2023). Therefore, organizations that engage intensively in knowledge-seeking activities are more likely to develop higher levels of green self-efficacy. **H₂: Knowledge Seeking Has a Positive Effect on Green Self-Efficacy.**

Green self-efficacy refers to the degree to which an organization believes in its capability to plan, manage, and execute environmentally oriented initiatives across its business activities (Tantawi & Noviana, 2024). Drawing on SCT, both individuals and organizations with high levels of self-efficacy are more likely to demonstrate persistence, proactive decision-making, and greater tolerance for strategic risk under uncertain conditions (Bandura, 1999). Within the supply chain context, this confidence is particularly important, as the implementation of green practices often entails higher upfront costs, increased coordination demands, and uncertain performance outcomes. Organizations with strong green self-efficacy are more inclined to adopt green supplier selection, implement waste reduction measures, and engage in environmentally responsible collaboration with supply chain partners (Abbas, 2022; Musaddiq et al., 2024). Prior empirical studies have consistently indicated that self-efficacy serves as a crucial mechanism for converting environmental intentions into concrete organizational actions (Seikkula-Leino & Salomaa, 2021; Hawamdeh, 2023). Consequently, organizations with higher green self-efficacy are expected to be more effective in implementing green supply chain management practices. **H₃: Green Self-Efficacy Has a Positive Effect on Green Supply Chain Management.**

While knowledge seeking enables organizations to access relevant and potentially valuable information, the adoption of green supply chain management frequently depends on the presence of strong internal confidence, particularly in contexts characterized by limited resources and elevated operational risk (Liu et al., 2023). Knowledge acquisition alone does not necessarily translate into action unless organizations perceive themselves as capable of effectively applying that knowledge to their operations. In this context, green self-efficacy operates as a psychological and organizational mechanism that connects knowledge to actual behaviors (Saleem et al., 2024). Prior empirical evidence indicates that knowledge-oriented efforts are more likely to lead to sustainable practices when organizations possess high confidence in their green capabilities (Zhang et al., 2023). Given that green supply chain management requires the integration of environmental considerations across interconnected activities, such as sourcing, production, distribution, and collaboration with suppliers and customers (Balon, 2020), both knowledge and confidence are essential. In the absence of adequate green self-efficacy, organizations may remain reluctant to implement green initiatives, despite having access to relevant knowledge (Sahoo et al., 2023). Accordingly, green self-efficacy is expected to mediate the relationship between knowledge seeking and green supply chain management. **H₄: Green Self-Efficacy Mediates the Effect of Knowledge Seeking on Green Supply Chain Management.**

Figure 1 illustrates the research model framework, showing the relationships between the variables in this study. The model explains that knowledge seeking acts as a factor influences green supply chain management. Additionally, green self-efficacy functions as a mediating variable that explains the mechanism by which knowledge seeking encourages the implementation of green supply chain management in manufacturing MSMEs.
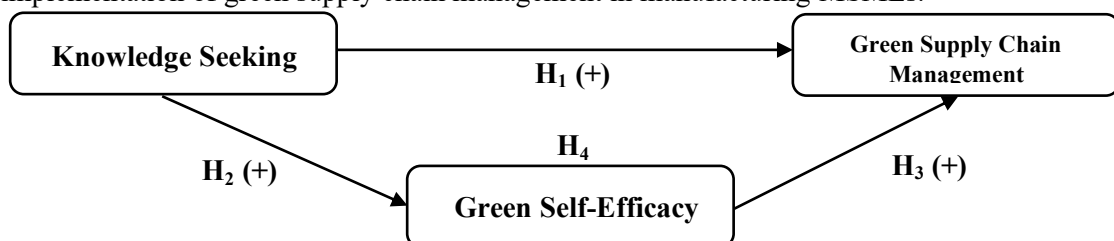

Figure 1. Research Framework

3. Research Methodology

The population of this study comprises manufacturing micro, small, and medium enterprises (MSMEs) in Yogyakarta, Indonesia. According to data from the Yogyakarta Cooperative and MSME Office, the number of registered MSMEs in Yogyakarta exceeds 300,000 units, with manufacturing MSMEs representing a substantial proportion. Although the exact number of active manufacturing MSMEs varies across subsectors and districts, this figure provides a reasonable population benchmark for assessing the sample representativeness. The sample in this study consisted of 119 MSME owners or managers who met the predefined criteria relevant to the research objectives. The sample size is considered adequate for partial least squares–structural equation modeling, as it satisfies Roscoe's (1975) guideline of a sample size between 30 and 500 for quantitative research and exceeds the minimum requirement of the 10-times rule from Hair et al. (2019). Furthermore, previous power analysis research suggests that sample sizes exceeding 100 respondents are adequate to identify medium effect sizes with satisfactory statistical power when applying partial least squares–structural equation modeling (Kock & Hadaya, 2018). This study employed a purposive sampling approach, whereby respondents were selected according to specific criteria that aligned with the research objectives. The criteria for respondents in this study were: (1) owners or managers of manufacturing MSMEs, (2) MSMEs located in Yogyakarta, and (3) MSMEs that have been actively engaged in production for more than one year. These criteria were selected to ensure that the respondents had an adequate understanding of the operational processes and supply chain management of the business.

Data were gathered using a structured questionnaire administered in person and online. All measurement items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The knowledge-seeking construct was operationalized using three indicators adapted from Yan et al. (2013) and Kankanhalli et al. (2005). Green self-efficacy was measured through ten indicators derived from Guo et al. (2019) and Chen et al. (2015), while green supply chain management was assessed using six indicators based on Norton et al. (2017) and Tseng et al. (2013). All measurement items were tailored to fit the context of manufacturing MSMEs.

The data were analyzed using SmartPLS version 4 through two primary stages: the evaluation of the measurement model and the assessment of the structural model. The measurement model evaluation aimed to examine the validity and reliability of the research instruments used in this study. Referring to Ghozali (2021), an indicator is regarded as valid when its loading factor exceeds 0.7. Therefore, indicators that failed to meet this threshold were removed from the model. Subsequently, a reliability analysis was performed to confirm the internal consistency of the measurement tool. According to Ghozali (2021), a variable is considered reliable if it has a Cronbach's alpha value above 0.6 and a composite reliability above 0.7. After the measurement model met the validity and reliability criteria, the next stage was hypothesis testing. Hypothesis testing was conducted by analyzing the relationship between the variables in the structural model. A hypothesis is accepted if the p-value is less than 0.05, which indicates a significant effect between the variables being tested (Ghozali 2021).

4. Result and Discussion

Descriptive Analysis

Based on Table 1, the characteristics of the respondents in this study show that women dominate MSME manufacturers in Yogyakarta (57%), with the majority of respondents being over 31 years old (36%), reflecting a productive age group with relatively mature business experiences. Most respondents were business owners (68%), thus having direct authority in strategic decision-making related to knowledge seeking, the application of environmentally friendly practices, and supply chain management. In terms of business type, respondents were dominated by the processed food industry (54%), followed by crafts and culture-based products (33%), textiles and similar products (9%), and other small-scale manufacturing (4%), all of which have production and supply chain activities that can cause environmental impacts.

Geographically, respondents were spread across the Yogyakarta region, with the largest concentration in Yogyakarta City (47%), while the rest came from Kulon Progo, Bantul, Sleman, and Gunungkidul regions. In addition, most respondents have been running their businesses for more than six years (45%), indicating a sufficient level of business experience to provide an accurate picture of knowledge seeking, green self-efficacy, and green supply chain management practices in the context of manufacturing MSMEs in Yogyakarta.

Table 1. Characteristics of Respondent

Classification	Description	Frequency	
		Total	Percentage
Gender	Male	51	43
	Female	68	57
Age	18–21 years old	14	12
	22–26 years old	33	28
	27–31 years old	29	24
	> 31 years old	43	36
Position in the business	Owner	81	68
	Manager	38	32
Type of business	Processed food industry	64	54
	Crafts and culture-based products	39	33
	Textiles and similar products	11	9
	Other small-scale manufacturing	5	4
Business Location	Yogyakarta	56	47
	Bantul	15	13
	Gunungkidul	11	9
	Sleman	14	12
	Kulon Progo	23	19
Length of business operation	1-3 years	24	20
	4-6 years	41	35
	>6 years	54	45

Validity Test

Table 2 and Figure 2 display the outcomes of the indicator validity assessment for each research construct: KS, green self-efficacy, and green supply chain management. The validity evaluation followed the criteria outlined by Ghozali (2021), which indicates that an indicator is deemed valid when its loading factor exceeds 0.7. The results demonstrate that all indicators achieved loading factor values above this threshold, confirming that each construct met the validity requirements and was appropriate for subsequent analysis.
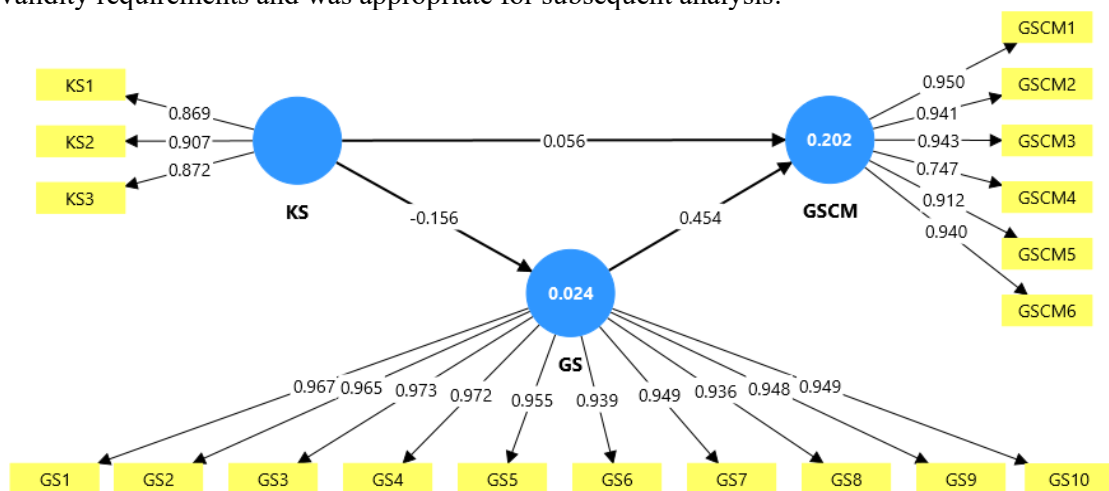
Figure 2. Measurement Framework

Table 2. Validity Test Results

Indicator	Knowledge Seeking	Green Self-efficacy	Green Supply Chain Management
KS1	0.869		
KS2	0.907		
KS3	0.872		
GS1		0.967	
GS2		0.965	
GS3		0.973	
GS4		0.972	
GS5		0.955	
GS6		0.939	
GS7		0.949	
GS8		0.936	
GS9		0.948	
GS10		0.949	
GSCM1			0.950
GSCM2			0.941
GSCM3			0.943
GSCM4			0.747
GSCM5			0.912
GSCM6			0.940

Reliability Test

Table 3 presents the results of the reliability analysis for the research constructs, including knowledge seeking, green self-efficacy, and green supply chain management. The findings indicate that all the variables met the reliability requirements. Consistent with the criteria suggested by Ghozali (2021), a construct is considered reliable when its Cronbach's alpha exceeds 0.6, and its composite reliability is greater than 0.7. Therefore, the measurement instruments employed in this study demonstrated sufficient internal consistency and were suitable for subsequent analysis.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Knowledge Seeking	0.859	0.914	0.780
Green Self-efficacy	0.989	0.991	0.913
Green Supply Chain Management	0.957	0.966	0.825

Hypothesis Test

Table 4 presents the results of the hypothesis testing conducted in this study. The results indicate that only the hypothesis proposing a positive influence of green self-efficacy on green supply chain management is supported, as evidenced by a p-value below the 0.05 threshold value. This suggests that manufacturing MSMEs' confidence in their capability to implement environmentally friendly practices plays a pivotal role in driving the adoption of green supply chain management. In contrast, the hypotheses examining the direct effect of knowledge seeking on green supply chain management, the influence of knowledge seeking on green self-efficacy, and the mediating effect of green self-efficacy were not statistically supported and were therefore rejected.

Table 4. Hypothesis Test Results

Variable	Original Sample	Sample Mean	Standard Deviation	T Statistics	P values
Knowledge Seeking → Green Supply Chain Management	-0.015	-0.021	0.098	0.153	0.879
Knowledge Seeking → Green self-efficacy	-0.156	-0.163	0.095	1.646	0.100
Green Self-efficacy → Green Supply Chain Management	0.454	0.457	0.086	5.272	0.000
Knowledge Seeking → Green Self-efficacy → Green Supply Chain Management	-0.071	-0.074	0.046	1.533	0.125

Discussion
The Effect of Knowledge Seeking on Green Supply Chain Management

The empirical results indicate that knowledge seeking does not significantly affect green supply chain management among manufacturing MSMEs in Yogyakarta. Rather than simply suggesting the ineffectiveness of knowledge, this finding points to a structural disconnect between learning activities and operational transformation. Field evidence shows that MSMEs actors actively participate in training programs, workshops and informal knowledge exchanges. However, these activities are predominantly oriented toward short-term survival objectives, such as improving product quality, reducing production costs, and strengthening market access. Environmental considerations, particularly those requiring cross-functional coordination and long-term commitment within the supply chain, are often perceived as secondary and frequently postponed. This result nuances the KBV by demonstrating that the mere availability or acquisition of knowledge does not automatically lead to strategic or operational change, especially in small-scale organizations (Grant, 1996). In the MSMEs context, knowledge is often fragmented, tacit, and centered on individual owners or managers, making it difficult to institutionalize systematic supply chain practices (Al-Koliby et al., 2025). The inability to translate sustainability-related knowledge into green supply chain management implementation reflects constraints in absorptive capacity, financial slack, technological readiness, and managerial bandwidth, rather than a lack of awareness. This interpretation is consistent with prior empirical studies showing that when resource limitations dominate strategic priorities, sustainability knowledge is insufficient to trigger meaningful operational change (Gawusu et al., 2022; Pangarso et al., 2022; Abdi et al., 2022). Accordingly, this study provides empirical insight that, within manufacturing MSMEs, knowledge-seeking functions more as an informational activity supporting immediate operational needs rather than as a transformational capability driving the adoption of green supply chain management.

The Effect of Knowledge Seeking on Green Self-efficacy

The non-significant relationship between knowledge seeking and green self-efficacy indicates that acquiring external knowledge does not automatically strengthen organizational confidence in implementing environmentally friendly practices. This finding reinforces the argument that learning without enactment has a limited psychological impact. Although MSMEs in Yogyakarta are exposed to sustainability-related information through training programs, workshops, and external networks, such exposure alone is insufficient to build green self-efficacy. From the perspective of SCT, self-efficacy is mainly formed through direct mastery experiences and is further strengthened by vicarious learning, social encouragement, and supportive psychological states (Bandura, 1999). Knowledge obtained from external sources represents only one component of this process and does not translate into strong self-efficacy when it is not accompanied by direct implementation experience (Gale et al., 2021). Empirical observations suggest that MSMEs face significant barriers to translating knowledge into practice, including limited financial resources, high perceived operational risk, and uncertainty regarding the economic returns of these initiatives. Consequently, sustainability-

related knowledge tends to remain conceptual and is not internalized as confidence in implementation capabilities. This finding extends previous research by demonstrating that high knowledge-seeking intensity can coexist with low green self-efficacy in contexts where experiential learning opportunities are limited. Consistent with Ho (2021) and Baldwin et al. (2023), this study shows that training-based interventions detached from practical applications may increase awareness without fostering empowerment. Consequently, the results highlight a persistent gap between learning and application, representing a structural challenge for small- and medium-sized organizations in developing green self-efficacy under conditions of resource scarcity and business uncertainty.

The Effect of Green Self-efficacy on Green Supply Chain Management

Unlike the insignificant impact of knowledge seeking, the results reveal that green self-efficacy exerts a positive effect on green supply chain management. This suggests that organizational confidence in its ability to implement environmentally responsible practices is a critical catalyst for action. Manufacturing MSMEs with stronger green self-efficacy are more inclined to tolerate higher implementation costs, address operational uncertainty, and engage in coordinated efforts with supply chain partners to adopt green initiatives such as sustainable raw material sourcing, effective waste management, and environmentally oriented collaboration with suppliers and customers (Raza et al., 2025). These behaviors suggest that green supply chain management adoption in MSMEs is driven less by what firms know and more by what they believe they are capable of doing. From a theoretical perspective, this finding provides strong empirical support for the SCT, which posits that self-efficacy shapes behavior, persistence, and readiness to act in the face of challenges (Bandura, 1999). High green self-efficacy encourages organizations to be proactive, adaptive, and consistent in integrating sustainability principles into supply chain activities, even under resource constraints and operational risks (Tarigan et al., 2021; Mankgele, 2023). Consistent with prior studies, the results confirm that psychological readiness often outweighs informational readiness in small and medium-sized organizations undergoing sustainability transition (Ahuja et al., 2023; Alshebami et al., 2024; Sreen et al., 2024). By emphasizing internal cognitive enablers rather than solely structural or informational capabilities, this study offers a deeper explanation of why firms with similar access to knowledge may display markedly different levels of green supply chain management adoption.

Green Self-efficacy mediates Knowledge Seeking and Green Supply Chain Management

The absence of a mediating effect of green self-efficacy offers a deeper theoretical explanation for the mechanism underlying green supply chain management adoption in manufacturing MSMEs. Although green self-efficacy exerts a direct and significant influence on green supply chain management, it does not operate as an intermediate mechanism through which knowledge seeking affects it. From the KBV perspective (Grant, 1996), this finding suggests that knowledge acquisition alone does not automatically evolve into higher-order capabilities unless it is effectively integrated, internalized, and enacted within organizational routines. In the MSMEs context, knowledge seeking appears to function primarily as an informational process rather than a capability-building mechanism that shapes internal beliefs. This result can be further explained through the SCT (Bandura, 1999), which emphasizes that self-efficacy is predominantly formed through mastery experiences and repeated successful enactment rather than through exposure to information alone. The empirical conditions of this study indicate that many MSMEs operate under severe resource constraints, face high perceived risks associated with green investments, and have limited opportunities to experiment with sustainability-oriented practice. Consequently, knowledge acquired from external sources is insufficient to generate the experiential reinforcement required to strengthen green self-efficacy. This explains why the mediation effect is rejected: knowledge seeking does not significantly enhance green self-efficacy and therefore cannot indirectly influence green supply chain management through this pathway. Importantly, this finding highlights a context-specific mechanism that has not been explored in prior studies. While previous research often

assumes a linear progression from knowledge acquisition to belief formation and behavioral change, current evidence suggests a discontinuous process in which learning and action are decoupled under conditions of uncertainty and limited organizational slack. In such settings, green self-efficacy emerges independently of knowledge seeking and is shaped by hands-on experience, trial-and-error learning, and observable success (Zhang et al., 2023; Nainggolan & Dewi, 2025). This interpretation aligns with empirical evidence showing that sustainability knowledge in small firms frequently remains symbolic when not supported by experiential validation (Rensburg & Ogujiuba, 2020; Faulks et al., 2021). Thus, the rejection of the mediation effect should not be interpreted as a theoretical failure but rather as an indication that the mechanism linking knowledge to sustainable practice is contingent on the organizational context. In manufacturing MSMEs, where risk aversion and survival-oriented decision-making dominate, confidence in implementation capabilities plays a more decisive role than knowledge accumulation. This insight extends both the KBV and SCT by demonstrating that the effectiveness of knowledge as a strategic resource depends on the presence of experiential and psychological enabling conditions. Practically, these findings suggest that policies and interventions aimed at promoting green supply chain management should move beyond knowledge dissemination toward structured experiential programs, such as pilot projects, incremental implementation support, and mentoring, that directly build green self-efficacy and reduce perceived implementation risk (Chitamba et al., 2025).

5. Conclusion

This study demonstrates that green self-efficacy, rather than knowledge seeking, is the key driver of green supply chain management adoption among manufacturing MSMEs. The findings reveal a critical gap between knowledge acquisition and practical implementation, indicating that access to sustainability-related information alone is insufficient to trigger supply chain practices. By integrating the KBV with SCT, this study highlights that internal confidence in implementation capability is the decisive mechanism that transforms sustainability intentions into operational actions. This study advances the sustainability and supply chain literature by offering a context-sensitive explanation of why similarly informed MSMEs exhibit divergent environmental behaviors. From a practical perspective, the results suggest that policies and MSMEs development programs should move beyond knowledge transfer toward confidence-building interventions, such as hands-on mentoring, pilot projects, and incremental implementation schemes that reduce perceived risks. Nonetheless, this research is constrained by its cross-sectional approach, dependence on self-reported measures, and focus on a single regional setting, which may limit the ability to draw causal conclusions and reduce the broader applicability of the findings. Future research should employ longitudinal and mixed-method approaches, explore additional psychological and institutional factors, and examine diverse regional or sectoral contexts to deepen the understanding of sustainable supply chain adoption in MSMEs.

REFERENCES

Abbas, B. A. H. (2022). The effect of waste management on green production practices: The mediating role of green self-efficacy. *International Journal of Business Society, 6*(6), 617-630. https://doi.org/10.30566/ijo-bs/2022.06.88

Abdi, R., Suharti, L., Usmanij, P., & Ratten, V. (2022). The MSMEs digital readiness in Indonesia: A test of moderating effect of intrinsic motivation and ICT knowledge. In *Strategic entrepreneurial ecosystems and business model innovation* (pp. 155-180). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80382-137-520221010

Acintya, A., Wulansari, D., Ali, S., & Hapsari, F. U. (2022). Sustainable manufacturing practices in micro, small, medium enterprises (MSMEs): Evidence from Indonesia. *Journal of Sustainability Science and Management*, *17*(10), 98-120. http://doi.org/10.46754/jssm.2022.10.008

Ahuja, J., Yadav, M., & Sergio, R. P. (2023). Green leadership and pro-environmental behaviour: A moderated mediation model with rewards, self-efficacy and training. *International Journal of Ethics and Systems*, *39*(2), 481-501. https://doi.org/10.1108/IJOES-02-2022-0041

Alam, S. S., Masukujjaman, M., Ahsan, M. N., & Kokash, H. A. (2024). Circular economy practices and sustainable performance of the textile and apparel industry: The roles of corporate environmental ethics and green self-efficacy. *Circular Economy and Sustainability*, *4*(3), 2365-2394. https://doi.org/10.1007/s43615-024-00397-z

Al-Koliby, I. S., Noor, N. H. M., Al-Swidi, A. K., Al-Hakimi, M. A., & Mehat, N. A. B. (2025). Enhancing sustainable performance among manufacturing SMEs: The interplay of knowledge management and organizational structure. *Discover Sustainability*, *6*(1), 469. https://doi.org/10.1007/s43621-025-01351-1

Al-Masri, R., & Wimanda, E. (2024). The role of green supply chain management in corporate sustainability performance. *Journal of Energy and Environmental Policy Options*, *7*(2), 1-9. http://resdojournals.com/index.php/JEEPO/article/view/353

Alshebami, A. S. (2023). Green innovation, self-efficacy, entrepreneurial orientation and economic performance: Interactions among Saudi small enterprises. *Sustainability*, *15*(3), 1961. https://doi.org/10.3390/su15031961

Alshebami, A. S., Fazal, S. A., Seraj, A. H. A., Al Marri, S. H., & Alsultan, W. S. (2024). Fostering potential entrepreneurs: An empirical study of the drivers of green self-efficacy in Saudi Arabia. *Discover Sustainability*, *5*(1), 21. https://doi.org/10.1007/s43621-024-00201-w

Baeshen, Y., Soomro, Y. A., & Bhutto, M. Y. (2021). Determinants of green innovation to achieve sustainable business performance: Evidence from SMEs. *Frontiers in Psychology*, *12*, 767968. https://doi.org/10.3389/fpsyg.2021.767968

Baldwin, C., Pickering, G., & Dale, G. (2023). Knowledge and self-efficacy of youth to take action on climate change. *Environmental Education Research*, *29*(11), 1597-1616. https://doi.org/10.1080/13504622.2022.2121381

Balon, V. (2020). Green supply chain management: Pressures, practices, and performance—An integrative literature review. *Business Strategy & Development*, *3*(2), 226-244. https://doi.org/10.1002/bsd2.91

Bandura, A. (1999). *The coherence of personality: Social-cognitive bases of consistency, variability, and organization*, Guilford Press.

Bhowmick, A., van der Zande, M. M., & Harris, R. (2025). Knowledge-seeking and knowledge sharing of health services across social networks and communities: A scoping review. *BMC Health Services Research*, *25*(1), 443. https://doi.org/10.1186/s12913-025-12525-y

Bloodgood, J. M., & Chen, A. N. (2022). Preventing organizational knowledge leakage: The influence of knowledge seekers' awareness, motivation and capability. *Journal of Knowledge Management*, *26*(9), 2145-2176. https://doi.org/10.1108/JKM-12-2020-0894

Chandrasiri, D. W. S. S. (2025). Environmental sustainability of the agro-food industry through strategic green supply chain management. *Sri Lanka Journal of Development Administration*, *7*(1). https://doi.org/10.4038/sljda.v7i1.7153

Chatzoudes, D., & Chatzoglou, P. (2023). Antecedents and effects of green supply chain management (GSCM) practices. *Benchmarking: An International Journal*, *30*(10), 4014-4057. https://doi.org/10.1108/BIJ-09-2021-0524

Chen, Y. S., Chang, C. H., Yeh, S. L., & Cheng, H. I. (2015). Green shared vision and green creativity: The mediation roles of green mindfulness and green self-efficacy. *Quality & Quantity*, *49*(3), 1169-1184. https://doi.org/10.1007/s11135-014-0041-8

Chitamba, A., Nyamurima, S., Mugano, G., & Mutambara, E. (2025). Capacity, funding, and knowledge gaps: Ecosystem challenges to SME ideation-insights from DUT's centre for social entrepreneurship rapid incubator. *International Journal of Advanced Business Studies*, *4*(6), 157-168. https://doi.org/10.59857/9a3p9f26

Cornellia, A. H., Saptoto, R., & Salsabela, K. (2025). Toward digital technology maturity: Empowering small medium enterprise in Sleman Yogyakarta Indonesia toward sustainable tourism and creative economy development. *Journalism*, *15*(2), 98-112. https://doi.org/10.17265/2160-6579/2025.02.008

Faulks, B., Song, Y., Waiganjo, M., Obrenovic, B., & Godinic, D. (2021). Impact of empowering leadership, innovative work, and organizational learning readiness on sustainable economic performance: An empirical study of companies in Russia during the COVID-19 pandemic. *Sustainability*, *13*(22), 12465. https://doi.org/10.3390/su132212465

Gale, J., Alemdar, M., Cappelli, C., & Morris, D. (2021). A mixed methods study of self-efficacy, the sources of self-efficacy, and teaching experience. In *Frontiers in Education* (Vol. 6, p. 750599). Frontiers Media SA. https://doi.org/10.3389/feduc.2021.750599

Gawusu, S., Zhang, X., Jamatutu, S. A., Ahmed, A., Amadu, A. A., & Djam Miensah, E. (2022). The dynamics of green supply chain management within the framework of renewable energy. *International Journal of Energy Research*, *46*(2), 684-711. https://doi.org/10.1002/er.7278

Ghozali, I. (2021). *Partial least squares: Konsep, teknik, dan aplikasi menggunakan program SmartPLS 3.2.9 untuk penelitian empiris (Edisi ke-3)*. Badan Penerbit Universitas Diponegoro.

Gidage, M., & Bhide, S. (2025). Exploring the nexus between intellectual capital, green innovation, sustainability and financial performance in creative industry MSMEs. *Journal of Enterprising Communities: People and Places in the Global Economy*, *19*(3), 457-484. https://doi.org/10.1108/JEC-07-2024-0134

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, *17*(S2), 109-122. https://doi.org/10.1002/smj.4250171110

Guo, L., Xu, Y., Liu, G., Wang, T., & Du, C. (2019). Understanding firm performance on green sustainable practices through managers' ascribed responsibility and waste management: Green self-efficacy as moderator. *Sustainability*, *11*(18), 4976. https://doi.org/10.3390/su11184976

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

Hawamdeh, N. A. (2023). Does humble leadership mitigate employees' knowledge-hiding behaviour? The mediating role of employees' self-efficacy and trust in their leader. *Journal of Knowledge Management*, *27*(6), 1702-1719. https://doi.org/10.1108/JKM-05-2022-0353

Ho, B. Q. (2021). Effects of learning process and self-efficacy in real-world education for sustainable development. *Sustainability*, *13*(1), 403. https://doi.org/10.3390/su13010403

Ibojo, B. O., & Mobolade, G. O. (2023). Effect of knowledge acquisition on organizational performance. *International Journal of Economics and Business Management*, *9*(8). https://doi.org/10.56201/ijebm.v9.no8.2023.pg10.24

Kankanhalli, A., Tan, B. C., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS quarterly*, 113-143. https://doi.org/10.2307/25148670

Khalil, S., & Ghadiri, S. M. (2025). Balancing exploration and exploitation: How green knowledge integration drives supplier performance in sustainable supply chains. *Logistics*, *9*(4), 176. https://doi.org/10.3390/logistics9040176

Khan, T., Emon, M. M. H., & Siam, S. A. J. (2024). Impact of green supply chain practices on sustainable development in Bangladesh. *Malaysian Business Management Journal*, *3*(2), 10-26480. https://doi.org/10.26480/mbmj.02.2024.73.83

Khandare, D. M. (2024). Green supply chain management: Strategies for eco-friendly business practices. *Journal of Advanced Zoology*, *45*. https://doi.org/10.53555/jaz.v45is4.4187

Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information systems journal*, *28*(1), 227-261. https://doi.org/10.1111/isj.12131

Lili, Z., & Rafiq, M. (2025). The impact of green participative leadership on pro-environmental behavior: Mediating role of green self-efficacy and moderating role of environmental awareness. *Journal of Hospitality and Tourism Insights*, *8*(5), 1783-1802. https://doi.org/10.1108/JHTI-06-2024-0537

Liu, J., Feng, Y., & Zhu, Q. (2023). Involving second-tier suppliers in green supply chain management: Drivers and heterogenous understandings by firms along supply chains. *International Journal of Production Research*, *61*(14), 4765-4785. https://doi.org/10.1080/00207543.2021.2002966

Mankgele, K. P. (2023). Green entrepreneurial self-efficacy and environmental performance of SMEs: Mediating and moderating role of green innovation and green purchase behaviour. *Global Business & Finance Review (GBFR)*, *28*(6), 48-58.

Musaddiq, R., Ullah, S., & Usman, M. (2024). Effect of green HRM and green self-efficacy on pro-environment behavior-Mediating role of environmental commitment. *Annals of Social Sciences and Perspective*, *5*(1), 115-125. https://doi.org/10.52700/assap.v5i1.333

Nainggolan, R., & Dewi, Y. K. (2025). The entrepreneurship, socioeconomic factors, and motivation in project-based learning success: The mediating role of self-efficacy. *Indonesian Journal of Learning Education and Counseling*, *8*(1), 36-46. https://doi.org/10.31960/ijolec.v8i1.3053

Nair, S. R., Pillai, K. G., & Demirbag, M. (2021). Reaping benefits from knowledge transfer–the role of confidence in knowledge. *Journal of Knowledge Management*, *25*(5), 1059-1080. https://doi.org/10.1108/JKM-04-2020-0262

Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior*, *38*(7), 996-1015. https://doi.org/10.1002/job.2178

Pangarso, A., Sisilia, K., Setyorini, R., Peranginangin, Y., & Awirya, A. A. (2022). The long path to achieving green economy performance for micro small medium enterprise. *Journal of Innovation and Entrepreneurship*, *11*(1), 1-19. https://doi.org/10.1186/s13731-022-00209-4

Polas, M. R. H., Tabash, M. I., Bhattacharjee, A., & Dávila, G. A. (2023). Knowledge management practices and green innovation in SMES: The role of environmental awareness towards environmental sustainability. *International Journal of Organizational Analysis*, *31*(5), 1601-1622. https://doi.org/10.1108/IJOA-03-2021-2671

Raza, A., Ali, J. K., & Rozaimie, A. (2025). Impact of ecological innovation, entrepreneurial mindset, and green entrepreneurial orientation on entrepreneurial self-efficacy and digital entrepreneurial intention in the context of Saudi Arabia. *Journal of Advanced Research in Business and Management Studies*, *41*(1), 108-123. https://doi.org/10.37934/arbms.41.1.108123

Rensburg, N. V., & Ogujiuba, K. (2020). Effect of mind-power ability among achieving entrepreneurs in South Africa: Identifying accustomed internal drivers. *Journal of Entrepreneurship in Emerging Economies*, *12*(4), 475-493. https://doi.org/10.1108/JEEE-08-2019-0125

Roscoe, J. T. (1975). *Fundamental research statistics for the behavioural sciences (2nd ed.)*. Holt, Rinehart & Winston.

Sahoo, S., Kumar, A., & Upadhyay, A. (2023). How do green knowledge management and green technology innovation impact corporate environmental performance? Understanding the role of green knowledge acquisition. *Business Strategy and the Environment*, *32*(1), 551-569. https://doi.org/10.1002/bse.3160

Saleem, F., Mateou, S., & Malik, M. I. (2024). How green transformational leaders trigger environmental performance? Unleashing the missing links through green self-efficacy, green empowerment, and green training of employees. *Sustainability*, *16*(22), 9982. https://doi.org/10.3390/su16229982

Seikkula-Leino, J., & Salomaa, M. (2021). Bridging the research gap—A framework for assessing entrepreneurial competencies based on self-esteem and self-efficacy. *Education Sciences*, *11*(10), 572. https://doi.org/10.3390/educsci11100572

Sheng, X., Chen, L., Yuan, X., Tang, Y., Yuan, Q., Chen, R., & Liu, H. (2023). Green supply chain management for a more sustainable manufacturing industry in China: A critical review. *Environment, Development and Sustainability*, *25*(2), 1151-1183. https://doi.org/10.1007/s10668-022-02109-9

Sreen, N., Sharma, V., Alshibani, S. M., Walsh, S., & Russo, G. (2024). Knowledge acquisition from innovation failures: A study of micro, small and medium enterprises (MSMEs). *Journal of Knowledge Management*, *28*(4), 947-970. https://doi.org/10.1108/JKM-03-2023-0184

Tantawi, R., & Noviana, N. A. H. (2024). employee green behavior's impact on sustainable environmental performance: Exploring the mediating-moderating roles of perceived organizational support and self-efficacy. *Jurnal Manajemen Dan Kewirausahaan*, *12*(1), 21-31.

Tarigan, Z. J. H., Siagian, H., & Jie, F. (2021). Impact of internal integration, supply chain partnership, supply chain agility, and supply chain resilience on sustainable advantage. *Sustainability*, *13*(10), 5460. https://doi.org/10.3390/su13105460

Tomé, E., & Gromova, E. (2021). Development of emergent knowledge strategies and new dynamic capabilities for business education in a time of crisis. *Sustainability*, *13*(8), 4518. https://doi.org/10.3390/su13084518

Tseng, M. L., Tan, R. R., & Siriban-Manalang, A. B. (2013). Sustainable consumption and production for Asia: Sustainability through green design and practice. *Journal of Cleaner Production*, *40*, 1-5. https://doi.org/10.1016/j.jclepro.2012.07.015

Veeravalli, S., Venkatraman, V., & Hariharan, M. (2020). Why do people seek knowledge? Tracing factors that affect knowledge seeking intention. *VINE Journal of Information and Knowledge Management Systems*, *50*(2), 271-290. https://doi.org/10.1108/VJIKMS-04-2019-0059

Yan, Y., Davison, R. M., & Mo, C. (2013). Employee creativity formation: The roles of knowledge seeking, knowledge contributing and flow experience in Web 2.0 virtual communities. *Computers in Human Behavior*, *29*(5), 1923-1932. https://doi.org/10.1016/j.chb.2013.03.007

Zerlinda, S., Anwar, M., & Bachtiar, A. (2025). The effect of regeneration and external knowledge on business survival through innovation practices as intervening variables in MSME crackers in Tanggulangin, Sidoarjo Regency. *Indonesian Journal of Business Analytics*, *5*(4), 3005–3016. https://doi.org/10.55927/ijba.v5i4.15114

Zhang, W., Zhang, X., & Zhou, Q. (2023). How does knowledge seeking and knowledge generation promote green supply chain management? An empirical study from China. *International Journal of Logistics Research and Applications*, *26*(1), 37-57. https://doi.org/10.1080/13675567.2021.1929882