“Orchestrating green strategies for sustainable competitive advantage in Vietnamese agricultural SMEs: A dynamic capabilities perspective”

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ORCHESTRATING GREEN STRATEGIES FOR SUSTAINABLE COMPETITIVE ADVANTAGE IN VIETNAMESE AGRICULTURAL SMEs: A DYNAMIC CAPABILITIES PERSPECTIVE

Abstract

As emerging economies pivot toward regenerative models, agricultural small and medium-sized enterprises face increasing pressure to harmonize sustainability with market performance. This study investigates the mechanisms through which green supply chain management and circular economy orientation drive sustainable competitive advantage, specifically focusing on the agricultural sector in Vietnam. Data were collected from 369 agricultural small and medium-sized enterprises and analyzed using partial least squares structural equation modeling to test the hypothesized relationships. The empirical results reveal that the structural model accounts for 43.3% of the variance in sustainable competitive advantage. While both strategies significantly enhance competitive outcomes, circular economy orientation ($\beta = 0.307$, $p < 0.001$) exhibits a stronger positive association with sustainable competitive advantage compared to green supply chain management ($\beta = 0.181$, $p < 0.001$). Furthermore, dynamic capabilities act as a potential mediator, partially mediating the relationship between green orientations and market superiority. Notably, market turbulence significantly strengthens the relationship between dynamic capabilities and sustainable competitive advantage ($\beta = 0.098$, $p = 0.024$), highlighting the boundary condition that enhances the strategic value of organizational agility. These findings suggest that for small and medium-sized enterprises in volatile emerging markets, transitioning from operational greening to systemic circularity is essential for long-term resilience and securing a robust competitive position.

Keywords circularity, sustainability, competitive advantage, supply chain, dynamic capabilities, market turbulence, SMEs, Vietnam

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INTRODUCTION

The global economic landscape is undergoing a fundamental transition from the traditional "extract-produce-use-dump" linear model toward a regenerative circular economy framework (Ellen MacArthur Foundation, 2013). With global resource utilization projected to double by 2060, business organizations are increasingly compelled to adopt green supply chain management and circular economy orientation to ensure long-term survival (Oberle et al., 2019). While green supply chain management integrates environmental considerations into supply chain functions such as procurement and reverse logistics (Zhu & Sarkis, 2004), circular economy orientation represents a strategic mindset that embeds circular principles and waste elimination into the organizational fabric (Gallardo-Vázquez et al., 2024).

Despite the growing literature on sustainable management, a significant research gap persists in how green supply chain management and

circular economy orientation interact to drive sustainable competitive advantage (SCA), particularly in emerging economies. Most existing studies have examined green supply chain management and circular economy orientation in isolation (Liu et al., 2018; Genovese et al., 2017), overlooking the potential synergy or relative strategic importance between operational greening and systemic circularity. Furthermore, the role of internal organizational mechanisms remains underexplored. While the natural resource-based view (NRBV) explains why firms should adopt green resources (Hart, 1995; Barney, 1991), it offers limited insight into how these resources are managed in volatile environments. This study employs dynamic capabilities theory (DCT) to bridge this gap, proposing that the transition from green intent to market superiority is mediated by a firm's ability to sense, seize, and reconfigure its resources (Teece, 2007).

Vietnam's agricultural sector provides a compelling empirical context to examine these relationships. As a major participant in global value chains, Vietnam faces increasing pressure from international trade agreements like the EU–Vietnam Free Trade Agreement (EVFTA) and stricter environmental requirements (Gereffi, 2018, 2025). Simultaneously, agricultural small and medium-sized enterprises (SMEs) continue to operate under substantial structural constraints regarding financial resources and technological expertise (OECD, 2021; World Bank, 2020). These constraints create a high-pressure environment where firm survival depends on the ability to continuously adapt and reconfigure resources in response to changing conditions (Teece, 2007; Helfat & Peteraf, 2003).

The intricate interplay between green supply chain management, circular economy orientation, and dynamic capabilities within this landscape presents a pressing scientific problem. While SMEs recognize the imperative of green strategies, a knowledge gap persists regarding how these orientations differentially impact organizational agility and market superiority.

1. LITERATURE REVIEW AND HYPOTHESES

Sustainability has evolved into a core strategic priority for firms operating in a global economy defined by environmental constraints and heightened stakeholder expectations. Drawing on the natural resource-based view (NRBV), strategic management scholars argue that integrating ecological considerations into operational and strategic decision-making generates not only environmental benefits but also long-term economic value and sustained competitive advantage (Hart, 1995; Hart & Dowell, 2011). Within this research stream, green supply chain management has emerged as a critical strategy for integrating environmental standards, such as green purchasing, eco-design, and reverse logistics, across supply chain activities (Zhu & Sarkis, 2004; Zhu et al., 2007). Complementing this operational orientation, the circular economy orientation represents a transformative mindset that prioritizes regenerative resource cycles, emphasizing the reuse and recovery of materials rather than disposal (Braungart et al., 2007; Prieto-Sandoval et al., 2018). While green supply chain management and circular economy orientation both contribute to sustainable competitive advantage by improving resource productivity and strengthening corporate legitimacy (Genovese et al., 2017; Ahmadov et al., 2024), their relative strategic roles and the internal mechanisms through which they are translated into competitive outcomes remain insufficiently explored.

Building on dynamic capabilities theory (DCT), we argue that the mere possession of green resources does not automatically yield superior performance; instead, firms must possess the ability to "sense, seize, and reconfigure" competencies to adapt to rapidly changing environments (Teece et al., 1997; Teece, 2007). In sustainability contexts, dynamic capabilities act as the organizational routines that enable firms to align their environmental strategies with evolving regulatory requirements and market demands (Wang & Ahmed, 2007). The implementation of complex green strategies like green supply chain management and circular economy

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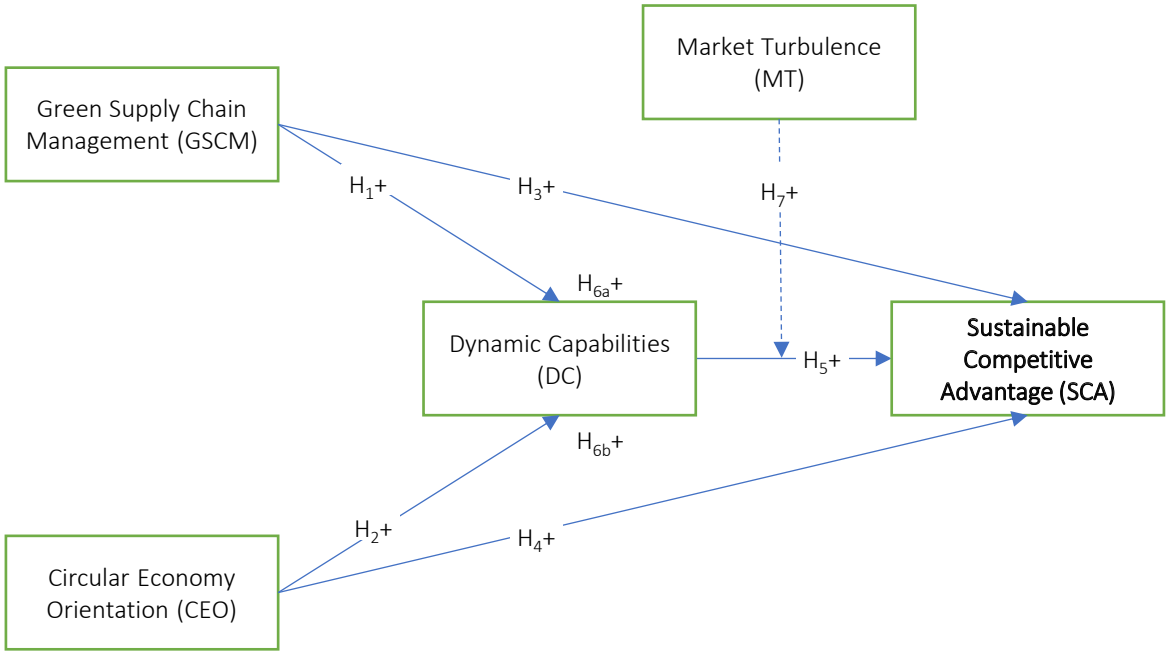

Figure 1. Conceptual framework

orientation often mandates substantial organizational transformation, such as restructuring supplier relationships or redesigning production systems, which necessitates robust dynamic capabilities to orchestrate resources effectively (Beske et al., 2014; Gallardo-Vázquez et al., 2024). Prior research has increasingly emphasized that dynamic capabilities play a crucial role in translating sustainability strategies into improved firm performance and competitive advantage (Beske et al., 2014; Asiedu et al., 2025).

Furthermore, the effectiveness of these strategic orientations is likely contingent upon external environmental conditions. According to contingency theory, the performance implications of organizational resources depend on the alignment between internal capabilities and environmental volatility (Lawrence & Lorsch, 1967). Market turbulence, reflecting the unpredictability of customer preferences and competitive dynamics, acts as a critical boundary condition (Jaworski & Kohli, 1993). Under highly turbulent conditions, the sensing and reconfiguring aspects of dynamic capabilities become particularly valuable, allowing firms to rapidly sense environmental changes and reconfigure their resource base to respond effectively (Wilden et al., 2013). Addressing these theoretical gaps requires a comprehensive examination of how green strategies interact with organizational capabilities and environmental conditions to generate sustainable competitive advantage.

Consequently, this paper seeks to decode the structural pathways and orchestration processes through which green resources are effectively deployed to secure sustainable competitive advantage amidst environmental volatility. By addressing these theoretical tensions, the study provides a robust framework for understanding the transition from operational greening to systemic circularity in high-pressure agricultural value chains. Based on the theoretical arguments presented above, the following hypotheses are proposed:

H1: Green supply chain management positively influences dynamic capabilities.

H2: Circular economy orientation positively influences dynamic capabilities.

H3: Green supply chain management positively influences sustainable competitive advantage.

H4: Circular economy orientation positively influences sustainable competitive advantage.

H5: Dynamic capabilities positively influence sustainable competitive advantage.

H6a: Dynamic capabilities mediate the relationship between green supply chain management and sustainable competitive advantage.

H6b: Dynamic capabilities mediate the relationship between circular economy orientation and sustainable competitive advantage.

H7: Market turbulence positively moderates the relationship between dynamic capabilities and sustainable competitive advantage.

The proposed conceptual research model is presented in Figure 1.

2. METHOD

This study employs a quantitative research design to decode the resource orchestration mechanisms within agricultural small and medium-sized enterprises (SMEs) in Vietnam. The primary data were analyzed using partial least squares structural equation modeling (PLS-SEM) via SmartPLS 4 software, a method chosen for its robustness in handling complex moderated-mediation models and its effectiveness with non-normal data distributions typical in SME research. The analytical procedure followed a rigorous two-stage approach. First, the measurement model was assessed for indicator reliability, internal consistency, and convergent and discriminant validity. Second, the structural model was evaluated to test the hypothesized paths using a bootstrapping procedure with 5,000 resamples to determine path coefficients (β) and significance levels (*p*-values).

To ensure high-level strategic insights, the target population consisted of business owners and senior managers who possess a comprehensive strategic vision and decision-making authority regarding green initiatives and resource allocation. Data were collected through an online survey between March and July 2025, resulting in 369 valid responses from firms involved in crop production, livestock, and agri-processing. The detailed demographic and firm-level characteristics of these 369 participating agricultural SMEs are synthesized and presented in Table 1, highlighting a diverse representation across various sub-sectors and organizational sizes. To ensure sampling transparency, a non-probability purposive sampling approach was utilized. The initial sampling frame comprised approximately 1,200 agricultural SMEs registered under regional business associations across Vietnam, with a primary focus on the Northern and North-Central regions. Online survey links were distributed directly via email and official channels between March and July 2025. Out of these, 420 responses were returned, and after eliminating incomplete questionnaires, 369 valid responses remained, yielding an effective response rate of 30.75%. Strict inclusion criteria were applied: eligible firms had to operate within crop production, livestock, or agri-processing, and possess formal operations as defined by national SME criteria. To eliminate common method unit bias, data collection was strictly restricted to exactly one key respondent per firm. Two screening questions were embedded at the beginning of the questionnaire to verify respondent competence: (1) confirming their position as a business owner or senior manager, and (2) ensuring a minimum tenure of two years within the enterprise to guarantee a comprehensive strategic vision regarding green initiatives.

Table 1. Profile of respondents

Characteristic	Category	Frequency (n)	Percentage (%)
Sub-sector	Crop production	148	40.1%
	Livestock	112	30.4%
	Agricultural processing	109	29.5%
Job position	Business owner	155	42.0%
	Senior manager	214	58.0%
Firm size	Small	247	66.9%
	Medium	122	33.1%

Note: n = 369.

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Ethical research protocols were strictly maintained throughout the study to ensure objectivity and integrity. Informed consent was obtained from all participants prior to data collection, emphasizing the voluntary nature of the survey. To eliminate potential bias and protect participant rights, all personal identifiers were removed, and data were processed in an anonymized, aggregated format, adhering to international standards for research confidentiality.

The measurement instruments were adapted from validated scales in existing literature and modified to fit the specific operational nuances of the Vietnamese agricultural SME sector. All items were assessed using a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Specifically, green supply chain management was measured using four items adapted from Zhu and Sarkis (2004) and Zhu et al. (2007). Circular economy orientation comprised six items derived from Gallardo-Vázquez et al. (2024) and Ahmadov et al. (2024). Dynamic capabilities were operationalized with six items based on Teece (2007) and Asiedu et al. (2025). Sustainable competitive advantage featured six items synthesized from Barney (1991), Hussein et al. (2024), and Asiedu et al. (2025). Finally, market turbulence was captured through three items adapted from Jaworski and Kohli (1993) and Taghizadeh et al. (2023). The full questionnaire and specific measurement items are presented in Appendix A.

3. RESULTS

3.1. Measurement model assessment

The measurement model was evaluated based on reliability, internal consistency, convergent validity, and discriminant validity. As presented in Table 2, all factor loadings for the items of green supply chain management, circular economy orientation, dynamic capabilities, market turbulence, and sustainable competitive advantage exceeded the recommended threshold of 0.708 (Hair et al., 2019), ranging from 0.755 to 0.909.

Internal consistency reliability was confirmed as Cronbach's alpha and Composite Reliability (CR) for all constructs were significantly higher than the 0.70 benchmark. Furthermore, the Average Variance Extracted (AVE) values ranged from 0.652 to 0.771, surpassing the 0.50 requirement, which indicates strong convergent validity.

Discriminant validity was confirmed through the HTMT ratio (all values < 0.85) and the Fornell–Larcker criterion. Additionally, the Variance Inflation Factor (VIF) values for all indicators were between 1.781 and 2.986, confirming the absence of multicollinearity (VIF < 3).

3.2. Structural model assessment

The model explains 34.7% of the variance in dynamic capabilities and 43.3% in sustainable competitive advantage. The Q^2_predict values for dynamic capabilities (0.337) and sustainable competitive advantage (0.331) indicate satisfactory predictive relevance. The SRMR value was 0.040 (< 0.08), confirming good model fit.

The bootstrapping procedure with 5,000 resamples was used to test the hypotheses. The results in Table 3 support all direct hypotheses (H1 to H5).

Regarding effect sizes (f^2), green supply chain management has a medium-to-large effect on dynamic capabilities (f^2 = 0.213), while green sup-

Table 2. Reliability and convergent validity

Construct	Items	Loadings	Cronbach's alpha	rho_a	CR (rho_c)	AVE
CEO	CEO1–CEO6	0.814 – 0.856	0.908	0.910	0.929	0.687
DC	DC1–DC6	0.794 – 0.879	0.905	0.908	0.927	0.679
GSCM	GSCM1–GSCM4	0.841 – 0.876	0.879	0.880	0.917	0.735
MT	MT1–MT3	0.846 – 0.909	0.852	0.856	0.910	0.771
SCA	SCA1–SCA6	0.755 – 0.866	0.893	0.899	0.918	0.652

Note: CEO = circular economy orientation; DC = dynamic capabilities; GSCM = green supply chain management; MT = market turbulence; SCA = sustainable competitive advantage.

Table 3. Direct and moderating hypotheses

Hypothesis	Relationship	Path Coeff. (O)	T-stats	P-values	Result
H1	GSCM → DC	0.389	9.176	0.000	Supported
H2	CEO → DC	0.348	8.302	0.000	Supported
H3	DC → SCA	0.347	6.894	0.000	Supported
H4	GSCM → SCA	0.181	3.967	0.000	Supported
H5	CEO → SCA	0.307	7.018	0.000	Supported
H7	MT x DC → SCA	0.098	2.262	0.024	Supported

Note: CEO = circular economy orientation; DC = dynamic capabilities; GSCM = green supply chain management; MT = market turbulence; SCA = sustainable competitive advantage.

Table 4. Mediation hypotheses

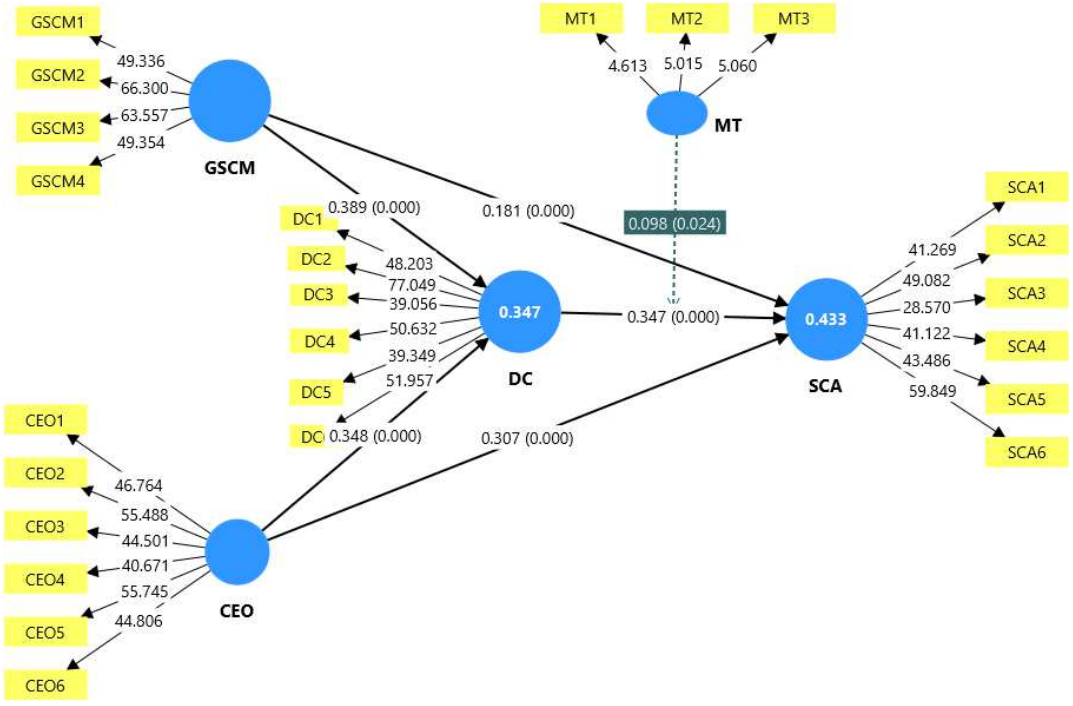
Hypothesis	Indirect Path	B (O)	T-stats	P-values	Result
H6a	GSCM → DC → SCA	0.135	5.410	0.000	Supported
H6b	CEO → DC → SCA	0.121	5.284	0.000	Supported

Note: CEO = circular economy orientation; DC = dynamic capabilities; GSCM = green supply chain management; MT = market turbulence; SCA = sustainable competitive advantage.

ply chain management has the smallest effect on sustainable competitive advantage (f^2 = 0.043). Notably, the interaction effect (market turbulence x dynamic capabilities) is significant (β = 0.098, p = 0.024), supporting the moderating role of market turbulence.

The results of the indirect effect analysis (Table 4) confirm that dynamic capabilities serve as a significant mediator in the relationships between green strategies and competitive advantage.

The visualized structural model, displaying the calculated path coefficients (β), their respective significance levels (p-values), and the variance explained (R^2) for the endogenous constructs, is illustrated in Figure 2.



Note: CEO = circular economy orientation; DC = dynamic capabilities; GSCM = green supply chain management; MT = market turbulence; SCA = sustainable competitive advantage.

Figure 2. Structural model

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4. DISCUSSION

The empirical results offer a comprehensive understanding of the mechanisms driving sustainable competitive advantage in Vietnam's agricultural sector. Regarding the antecedents of dynamic capabilities (H1, H2), this study finds that both green supply chain management (β = 0.389) and circular economy orientation (β = 0.348) are strongly and positively associated with organizational agility. The significant impact of green supply chain management on dynamic capabilities aligns with Beske et al. (2014), who argued that integrating environmental standards into supply chains forces firms to develop "sensing" and "reconfiguring" routines to handle partner interactions. However, the strong role of circular economy orientation in nurturing dynamic capabilities supports the recent perspective of Prieto-Sandoval et al. (2018), suggesting that circularity is inherently a generative process that compels continuous renewal of resource cycles. In the practical context of Vietnam, as SMEs face "green barriers" from the EVFTA, these strategic orientations serve as catalysts that transform rigid traditional operations into flexible, market-responsive systems.

A compelling finding is the differential links of these strategies with sustainable competitive advantage (H3, H4). While both green supply chain management and circular economy orientation are significant, the influence of circular economy orientation (β = 0.307) is substantially higher than that of green supply chain management (β = 0.181). This disparity suggests a structural nuance: green supply chain management has evolved into a "market qualifier" or a compliance necessity to circumvent non-tariff barriers, yielding diminishing returns in terms of unique advantage. This result mirrors the findings of Asiedu et al. (2025), who noted that standard green practices in emerging markets are becoming industry norms. In contrast, circular economy orientation demands a fundamental redesign toward eco-effectiveness, creating idiosyncratic and path-dependent assets that are harder to imitate. This aligns with Ahmadov et al. (2024), who posited that circularity-based models offer a more durable barrier to entry than incremental eco-efficiency.

The confirmation of the mediating role of dynamic capabilities (H6a, H6b) provides a model-based mechanism connecting green orientations to perceived competitive advantage. This validates the "strategy–capability–performance" logic, reinforcing Teece (2007)'s assertion that strategic orientations cannot yield competitive results without an internal transformation mechanism. For Vietnamese agricultural SMEs, possessing green assets like certifications is insufficient; without the mediation of sensing and reconfiguring capabilities, such assets remain static and fail to create sustained value. This reinforces the arguments of Hart (1995) and Eisenhardt and Martin (2000) that environmental strategies generate advantage only when actively enacted through organizational agility.

Finally, the moderating effect of market turbulence (H7) (β = 0.098) offers a profound contribution to contingency theory. This implies that the value of dynamic capabilities is non-linear and becomes amplified under external instability. In Vietnam's agricultural sector, where firms face volatile demand and climate disruptions, market turbulence acts as a "stress test". Firms with strong dynamic capabilities can rapidly realign resources to outperform rigid competitors, supporting the "capability–environment fit" perspective of Wilden et al. (2013) and Jaworski and Kohli (1993). Ultimately, this shifts the focus from simple resource possession to resource orchestration, explaining why some SMEs thrive while others struggle despite similar green investments.

CONCLUSION

This study aims to examine how environmentally oriented strategies contribute to sustainable competitive advantage among agricultural small and medium-sized enterprises (SMEs) in Vietnam. Specifically, the paper investigates the roles of green supply chain management and circular economy orientation in enhancing sustainable competitive advantage, while considering the mediating role of dynamic capabilities and the moderating influence of market turbulence.

The empirical results provide several important insights. First, both green supply chain management and circular economy orientation significantly enhance sustainable competitive advantage, indicating that environmentally oriented strategies represent important drivers of competitiveness for agricultural SMEs operating in emerging markets. However, the results reveal that circular economy orientation exerts a stronger influence on sustainable competitive advantage than green supply chain management, suggesting that systemic circular strategies may generate more durable competitive advantages than incremental improvements in supply chain environmental practices. Second, the findings confirm the critical role of dynamic capabilities as a mediating mechanism linking green strategies with competitive outcomes. This result indicates that the effectiveness of sustainability initiatives depends not only on the adoption of environmentally oriented practices but also on the firm's ability to sense opportunities, mobilize resources, and continuously reconfigure organizational capabilities. Third, the moderating effect of market turbulence demonstrates that the value of dynamic capabilities becomes even more pronounced under conditions of environmental uncertainty. In highly turbulent markets, firms possessing stronger adaptive capabilities are better able to translate green strategies into sustainable competitive advantage.

From a theoretical perspective, this study contributes to the growing literature on sustainable strategic management by integrating the natural resource-based view (NRBV) and dynamic capabilities theory (DCT) within a unified framework. By examining the combined effects of green supply chain management, circular economy orientation, and dynamic capabilities, the analysis advances current understanding of how environmentally oriented resources are transformed into competitive outcomes. In addition, the identification of market turbulence as a contextual moderator enriches contingency-based perspectives by demonstrating that the effectiveness of organizational capabilities is influenced by environmental conditions. These findings contribute to bridging the gap between sustainability strategies and competitive advantage research, particularly within the context of emerging economies.

The findings also offer important managerial and policy implications. For managers of agricultural SMEs, the results suggest that sustainability initiatives should extend beyond compliance-driven environmental practices toward more systemic circular strategies that emphasize resource regeneration and closed-loop production systems. Investing in the development of dynamic capabilities, such as market sensing, resource reconfiguration, and strategic flexibility, appears essential for transforming environmental strategies into tangible competitive benefits. For policymakers, the results highlight the importance of supporting circular economy initiatives and strengthening the institutional ecosystem that enables SMEs to adopt sustainable technologies and innovative business models. Policies that facilitate access to financial resources, technological infrastructure, and sustainability training programs may significantly enhance the sustainable competitive advantage and market resilience of agricultural firms within the domestic market, while establishing a strategic foundation for potential future international value chain integration.

Despite these contributions, this study has several limitations that provide opportunities for future research. First, the cross-sectional nature of the data limits the ability to capture the dynamic evolution of sustainability strategies and capabilities over time. Future studies could employ longitudinal research designs to better understand how green strategies and dynamic capabilities co-evolve. Second, the empirical analysis focuses on agricultural SMEs in Vietnam, which may limit the generalizability of the findings to other industries or national contexts. Comparative studies across different emerging economies or sectors could provide additional insights into the general applicability of the proposed framework. Finally, future research could explore additional contextual variables, such as digital transformation, green financing accessibility, or government policy stringency, that may further influence the relationship between sustainability strategies and competitive advantage. Additionally, while this study measures sustainable competitive advantage as a generalized strategic outcome, it does not explicitly capture internationalization metrics such as export intensity or foreign market revenue. Future research should integrate empirical indicators of international performance to examine whether circular frameworks yield differential returns in global markets.

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AUTHOR CONTRIBUTIONS

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Software: Quynh Xuan Nguyen.
Supervision: Quynh Xuan Nguyen.
Validation: Quynh Xuan Nguyen, Hai Thanh Thi Nguyen.
Visualization: Quynh Xuan Nguyen, Hai Thanh Thi Nguyen.
Writing – original draft: Quynh Xuan Nguyen, Hai Thanh Thi Nguyen.
Writing – review & editing: Quynh Xuan Nguyen, Hai Thanh Thi Nguyen.

REFERENCES

1. Ahmadov, T., Durst, S., Nguyen, Q. M., Foli, S., & Gerstlberger, W. (2024). Circular economy practices in manufacturing SMEs: Exploration of stakeholder pressure, managerial perception, and the mediating role of circular economy orientation. *Journal of Circular Economy, 3*(1), 1-29. https://doi.org/10.55845/BKUT9454
2. Asiedu, E., Alhassan, S., Majeed, M., & Malcalm, E. (2025). Green dynamic capability and sustainability performance: The roles of green innovation and green sustainability of manufacturing firms. *Discover Sustainability, 9*, Article 961. https://doi.org/10.1007/s43621-025-01445-w
3. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120. https://doi.org/10.1177/014920639101700108
4. Beske, P., Land, A., & Seuring, S. (2014). Sustainable supply chain management practices and dynamic capabilities in the food industry: A critical analysis of the literature. *International Journal of Production Economics, 152,* 131-143. https://doi.org/10.1016/j.ijpe.2013.12.026
5. Braungart, M., McDonough, W., & Bollinger, A. (2007). Cradle-to-cradle design: Creating healthy emissions – A strategy for eco-effective product and system design. *Journal of Cleaner Production, 15*(13-14), 1337-1348. https://doi.org/10.1016/j.jclepro.2006.08.003
6. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal, 21*(10-11), 1105-1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11%3C1105::AID-SMJ133%3E3.0.CO;2-E
7. Ellen MacArthurFoundation. (2013). *Towards the circular economy*. Retrieved from https://content.ellenmacarthurfoundation.org/m/50c85a620a58955/original/Towards-the-circular-economy-Vol-2.pdf
8. Gallardo-Vázquez, D., Herrador-Alcaide, T. C., & Matin, A. (2024). Circular economy orientation from corporate social responsibility: A view based on structural equation modeling and a fuzzy-set qualitative comparative analysis. *Sustainable Development, 32,* 5581-5601. https://doi.org/10.1002/sd.2957
9. Genovese, A., Acquaye, A. A., Figueroa, A., & Koh, S. C. L. (2017). Sustainable supply chain management and the transition towards a circular economy: Evidence and some applications. *Omega, 66*(Part B), 344-357. https://doi.org/10.1016/j.omega.2015.05.015
10. Gereffi, G. (2018). *Global value chains and development: Redefining the contours of 21st century capitalism*. Cambridge University Press. https://doi.org/10.1017/9781108559423
11. Gereffi, G. (2025). Industrial policy and emerging technologies: A global value chain perspective. *SSRN Electronic Journal*, *30*(5), 18-32. https://doi.org/10.2139/ssrn.5842803
12. 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
13. Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review, 20*(4), 986-1014. https://doi.org/10.5465/amr.1995.9512280033
14. Hart, S. L., & Dowell, G. (2010). A natural-resource-based view of the firm: Fifteen years after. *Journal of Management, 37*(5), 1464-1479. https://doi.org/10.1177/0149206310390219
15. Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles.

Strategic Management Journal, 24(10si), 997-1010. https://doi.org/10.1002/smj.332

16. Hussein, H., Albadry, O. M., Mathew, V., Al-Romeedy, B. S., Alsetoohy, O., Abou Kamar, M., & Khairy, H. A. (2024). Digital leadership and sustainable competitive advantage: Leveraging green absorptive capability and eco-innovation in tourism and hospitality businesses. *Sustainability (Switzerland), 16*(13). https://doi.org/10.3390/su16135371
17. Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing, 57*(3), 53-70. https://doi.org/10.1177/002224299305700304
18. Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment: Managing differentiation and integration*. Boston, MA: Harvard Business School Press.
19. Liu, J., Feng, Y., Zhu, Q., & Sarkis, J. (2018). Green supply chain management and the circular economy: Reviewing theory for advancement of both fields. *International Journal of Physical Distribution & Logistics Management, 48*(8), 794-817. https://doi.org/10.1108/IJPDLM-01-2017-0049
20. Oberle, B., Bringezu, S., Hatfield-Dodds, S., Hellweg, S., Schandl, H., Clement, J., Cabernard, L., Che, N., Chen, D., Droz-Georget , H., Ekins, P., Fischer-Kowalski, M., Flörke, M., Frank, S., Froemelt , A., Geschke, A., Haupt , M., Havlik, P., Hüfner, R., ... Zhu, B. (2019). *Global Resources Outlook 2019: Natural Resources for the Future We Want*. Nairobi, Kenya: United Nations Environment Programme. Retrieved from https://pure.iiasa.ac.at/id/eprint/15879/1/unep_252_global_resource_outlook_2019_web.pdf
21. OECD. (2021). *SME and entrepreneurship policy in Viet Nam*. Retrieved from https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/01/sme-and-entrepreneurship-policy-in-viet-nam_d165e94e/30c79519-en.pdf
22. Prieto-Sandoval, V., Jaca, C., & Ormazabal, M. (2018). Towards a consensus on the circular economy. *Journal of Cleaner Production, 179,* 605-615. https://doi.org/10.1016/j.jclepro.2017.12.224
23. Taghizadeh, S. K., Rahman, S. A., Nikbin, D., Radomska, M., & Maleki Far, S. (2023). Dynamic capabilities of the SMEs for sustainable innovation performance: Role of environmental turbulence. *Journal of Organizational Effectiveness, 11*(4), 767-787. https://doi.org/10.1108/JOEPP-04-2023-0166
24. Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350. https://doi.org/10.1002/smj.640
25. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. In *Strategy, Technology and Public Policy* (pp. 197-222). Edward Elgar Publishing. https://doi.org/10.4337/9781035334995.00014
26. Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews, 9*(1), 31-51. https://doi.org/10.1111/j.1468-2370.2007.00201.x
27. Wilden, R., Gudergan, S. P., Nielsen, B. B., & Lings, I. (2013). Dynamic capabilities and performance: Strategy, structure and environment. *Long Range Planning, 46*(1-2), 72-96. https://doi.org/10.1016/j.lrp.2012.12.001
28. World Bank. (2020). *Vietnam – Deepening international integration and implementing the EVFTA*. Retrieved from https://documents1.worldbank.org/curated/en/866871589557725251/pdf/Vietnam-Deepening-International-Integration-and-Implementing-the-EVFTA.pdf
29. Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management, 22,* 265-289. https://doi.org/10.1016/j.jom.2004.01.005
30. Zhu, Q., Sarkis, J., & Lai, K. (2007). Green supply chain management: Pressures, practices and performance within the Chinese automobile industry. *Journal of Cleaner Production, 15*(11-12), 1041-1052. https://doi.org/10.1016/j.jclepro.2006.05.021

http://dx.doi.org/10.21511/ppm.24(3).2026.08

APPENDIX A

Table A1. Measurement scales

Code	Measurement Items	Source
GSCM	**Green Supply Chain Management**	Zhu and Sarkis (2004); Zhu et al. (2007)
GSCM1	Our firm prioritizes suppliers who hold environmental certifications.	
GSCM2	We collaborate with customers to design eco-friendly packaging and products.	
GSCM3	Our firm implements internal environmental management systems and audits.	
GSCM4	We have a system for investment recovery, including the sale of scrap materials.	
CEO	**Circular Economy Orientation**	Gallardo-V**ázquez et al. (٢٠٢٤)**; Ahmadov et al. (2024)
CEO1	Circular economy principles are a core part of our long-term strategic vision.	
CEO2	Our firm prioritizes business models that emphasize resource rejuvenation and reuse.	
CEO3	We actively seek partnerships to close resource loops within our supply chain.	
CEO4	Our firm prioritizes eco-design to ensure products/by-products are easily biodegradable or recyclable.	
CEO5	We utilize advanced systems to transform agricultural waste into high-value inputs.	
CEO6	Our firm invests in technologies for nutrient recovery and soil/water restoration in production.	
DC	**Dynamic Capabilities**	Teece (2007); Asiedu et al. (2025)
DC1	We frequently scan the market for new green technologies and trends.	
DC2	We have established formal processes to identify shifts in international environmental regulations (e.g., EVFTA).	
DC3	We quickly invest in new opportunities for sustainable innovation.	
DC4	Our firm effectively mobilizes resources to pilot-test new circular business models.	
DC5	We restructure our resource base to adapt to market shifts.	
DC6	We continuously align our internal functional areas to match changing green market demands.	
SCA	**Sustainable Competitive Advantage**	Barney (1991); Hussein et al. (2024); Asiedu et al. (2025)
SCA1	Our products offer superior quality and environmental value compared to competitors.	
SCA2	We have developed green resources and capabilities that are difficult to imitate.	
SCA3	Our brand image is strongly associated with environmental responsibility.	
SCA4	Our firm achieves higher cost efficiency through resource productivity than our rivals.	
SCA5	Our competitive position remains resilient against shocks in raw material and resource prices.	
SCA6	Our firm holds international green certifications that secure preferential access to high-end markets.	
MT	**Market Turbulence**	Jaworski and Kohli (1993); Taghizadeh et al. (2023)
MT1	Customer preferences in our market shift rapidly and unpredictably.	
MT2	Our competitors frequently introduce new products or technologies.	
MT3	It is difficult to predict the future demand for our agricultural products.	