



Strategic Agility Mediates MSME Sustainability amid Trade Pressures and Green Finance Constraints in South Sulawesi

Kevin Samuel Massie* and Nurdjanah Hamid

Hasanuddin University, Makassar, Indonesia
*massieks23a@student.unhas.ac.id

Abstract. The growing uncertainty triggered by trade wars, climate-related financial pressures, and governance challenges has raised urgent concerns over the sustainability of micro, small, and medium enterprises (MSMEs), especially in developing regions. This study aims to empirically examine the mediating role of strategic agility in the relationship between trade war pressure, access to green finance, and governance capacity toward sustainability performance of MSMEs in South Sulawesi, Indonesia. Grounded in Dynamic Capability Theory and Institutional Theory, the research employs a quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) based on survey data from 182 MSME owners and managers across Makassar, Gowa, Parepare, and Maros. The results indicate that all proposed direct and indirect relationships are statistically significant. Strategic agility not only exerts a direct positive influence on sustainability but also serves as a robust mediator linking external pressures and internal capabilities to sustainable outcomes. The findings contribute to theory development in MSME sustainability by contextualizing agility within regional governance and financing constraints. Practically, this study suggests the importance of local green finance accessibility and agility training to enhance MSME resilience. Limitations and directions for future research are discussed to broaden the generalizability of the model across regions and industries.

Keywords: Strategic Agility, MSMEs, Sustainability Performance, Trade War Pressure, Green Finance.

1 Introduction

Global economic uncertainty has intensified over the past decade, driven by ongoing trade wars, climate-induced shocks, and the lingering effects of the COVID-19 pandemic. These pressures have significantly affected micro, small, and medium-sized enterprises (MSMEs), especially in developing countries. In Indonesia, MSMEs account for more than 90% of business entities and contribute substantially to the national GDP. Yet, many of these enterprises remain fragile and highly vulnerable to external shocks due to their limited access to financial resources, weak internal governance, and low adaptive capacity. The province of South Sulawesi, which is home

© The Author(s) 2026

M. Nohong et al. (eds.), *Proceedings of the 10th International Conference on Accounting, Management, and Economics (10th ICAME 2025)*, Advances in Economics, Business and Management Research 388,
https://doi.org/10.2991/978-94-6239-709-5_154

to over one million MSMEs, exemplifies this condition. Despite their vital contribution to local economies and employment, MSMEs in this region continue to face serious challenges in adapting to market fluctuations, environmental regulations, and shifts in trade policy. Their capacity to engage in sustainable business practices remains uneven and underdeveloped.

In this context, strategic agility has emerged as a critical organizational capability that enables firms to respond effectively to external pressures, reconfigure internal resources, and pursue innovation amid uncertainty. Strategic agility refers to the ability of an enterprise to sense, interpret, and swiftly adapt to environmental changes. Prior studies have shown that agility not only enhances business responsiveness but also mediates the relationship between external challenges and long-term sustainability outcomes. For instance, agility has been linked to higher levels of innovation, resilience, and stakeholder engagement in MSMEs [1, 2]. Moreover, recent findings suggest that agility plays a central mediating role in aligning external enablers such as green finance accessibility and governance capacity with organizational sustainability [3, 4].

However, despite this growing recognition, empirical studies that explicitly test the mediating role of strategic agility in MSME contexts remain scarce, particularly in regions outside Java or major urban centers. Much of the literature has concentrated on manufacturing sectors in advanced economies or on large firms, leaving a research gap in understanding how MSMEs in decentralized regions such as South Sulawesi navigate sustainability challenges. Studies that explore how trade pressure, access to green finance, and governance capabilities influence sustainability through agility mechanisms are especially limited. While some evidence exists in broader Southeast Asian or African contexts [5, 6], few have investigated these dynamics in the Indonesian archipelago where policy, culture, and institutional support differ substantially.

This study addresses that gap by examining the extent to which strategic agility mediates the influence of trade pressure, access to green finance, and governance capacity on MSME sustainability in South Sulawesi. Using a quantitative approach based on structural equation modeling (SEM-PLS), this research tests a conceptual framework that integrates external institutional and financial pressures with internal agility mechanisms to evaluate sustainability outcomes. By doing so, this study contributes new empirical evidence to the literature on MSME resilience and sustainability, particularly in under-researched regional settings.

The contribution of this research is threefold. First, it provides contextual novelty by focusing on MSMEs in South Sulawesi a region often overlooked in mainstream sustainability research. Second, it extends the theoretical foundation of dynamic capability theory and institutional theory by empirically validating agility as a mediating construct in volatile environments. Third, it offers actionable insights for policymakers and development practitioners in designing support mechanisms, including green financial instruments and governance training, that are responsive to the unique challenges of MSMEs in emerging regions. In light of the increasing complexity of the global economic landscape, understanding how MSMEs can build strategic agility to achieve sustainable outcomes is both a timely and necessary inquiry.

2 Literature Review

This study is grounded in an integrated conceptual framework that draws upon Dynamic Capability Theory and Institutional Theory to explain how micro, small, and medium enterprises (MSMEs) navigate external pressures and pursue sustainable performance through the internal mechanism of strategic agility. Dynamic Capability Theory emphasizes the ability of organizations to adapt, integrate, and reconfigure their internal resources in response to rapidly changing environments [7, 8, 1]. Within this view, strategic agility is considered a core capability that empowers organizations to continuously realign strategies, innovate, and sustain performance amid uncertainty.

Meanwhile, Institutional Theory posits that organizational behavior is largely shaped by external pressures such as regulatory changes, market expectations, and societal norms that push firms toward legitimacy and adaptive practices [9, 10, 11]. In the context of MSMEs, the influence of trade war pressures, the availability of green financing, and the quality of governance capacity represent institutional forces that can either constrain or enhance sustainability outcomes. However, the extent to which these external forces translate into sustainable practices often depends on whether internal mechanisms such as agility are in place.

The first antecedent explored in this study is Trade War Pressure (TWP), which refers to the perceived impact of global trade uncertainty, such as export restrictions or input price volatility, on MSMEs. Empirical studies indicate that firms under trade stress develop agility to remain competitive and resilient [9, 8]. Hence, we hypothesize that trade pressures positively influence strategic agility, which in turn enhances sustainability performance.

Second, Access to Green Finance (AGF) is a critical enabler of sustainability transformation, particularly in resource-constrained contexts. Access to environmentally linked financial instruments, whether conventional or Islamic, facilitates investment in cleaner technologies and sustainable operations. However, the realization of these benefits requires MSMEs to possess the agility to reallocate financial resources strategically. Prior studies support the mediating role of agility in translating financial access into tangible sustainability outcomes [12, 11, 13].

Third, Governance Capacity (GC) defined as the structure of internal decision-making and transparency has also been positively linked to both agility and sustainability. Firms with strong governance are more capable of coordinating internal changes and responding adaptively to external demands. Research by Liang et al. [14] and Franco et al. [15] confirms that governance enhances organizational agility, which in turn strengthens the firm's sustainable performance.

In addition to these antecedents, Strategic Agility (SA) itself is tested as a direct predictor of MSME sustainability. Numerous studies have shown that agility leads to improved environmental, social, and economic outcomes through enhanced innovation, responsiveness, and proactive capability building [16, 17, 18]. In this study, sustainability performance is conceptualized as a multi-dimensional construct encompassing economic viability, environmental responsibility, and social contribution.

Synthesizing these insights, the following hypotheses are formulated:

- **H1:** Trade War Pressure significantly influences Strategic Agility.
- **H2:** Access to Green Finance significantly influences Strategic Agility.
- **H3:** Governance Capacity significantly influences Strategic Agility.
- **H4:** Strategic Agility significantly influences Sustainability Performance.
- **H5:** Strategic Agility mediates the effect of Trade War Pressure on Sustainability Performance.
- **H6:** Strategic Agility mediates the effect of Access to Green Finance on Sustainability Performance.
- **H7:** Strategic Agility mediates the effect of Governance Capacity on Sustainability Performance.

3 Methodology

This study employed a quantitative explanatory research design using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to examine the mediating role of strategic agility in the relationship between trade war pressure, access to green finance, governance capacity, and sustainability performance of MSMEs in South Sulawesi. The study was conducted in four districts Makassar, Gowa, Parepare, and Maros targeting MSMEs in the agribusiness, trade, and small-scale manufacturing sectors due to their exposure to global market shocks and policy-driven sustainability transitions. A purposive sampling technique was used to select 187 owners or managers with strategic decision-making roles, based on previous studies in similar sectors [19, 20, 21]. Data were collected using a structured questionnaire adapted from validated instruments and measured on a 5-point Likert scale. Variables included Trade War Pressure (perceived economic uncertainty), Access to Green Finance (ease of obtaining sustainable funding), Governance Capacity (decision-making and transparency structures), Strategic Agility (adaptive response capability), and Sustainability Performance (economic, environmental, and social indicators). Data analysis was conducted using SmartPLS 4 in two stages: the outer model was assessed via reliability and validity (loadings, AVE, CR), while the inner model tested path coefficients, R², f² and mediation effects using bootstrapping with 5,000 samples. Endogeneity concerns were addressed through theoretical model structure, variable measurement design, and evaluation of Variance Inflation Factor (VIF), ensuring no multicollinearity and maintaining robustness consistent with SEM-PLS assumptions [22, 23, 24].

4 Result

4.1 Respondents’ Demographic Profile

Table 1. Descriptive Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	109	58.3

Variable	Category	Frequency (n)	Percentage (%)
Age Group	Female	78	41.7
	<30 years	21	11.2
	30–39 years	65	34.8
	40–49 years	47	25.1
	≥50 years	54	28.9
Education Level	High School	29	15.5
	Diploma/Vocational	68	36.4
	Bachelor's Degree	80	42.8
	Postgraduate	10	5.3
Business Experience	<3 years	25	13.4
	3–5 years	37	19.8
	>5 years	125	66.8
Business Sector	Agribusiness	60	32.1
	Trade	84	44.9
	Manufacturing	43	23.0

Source: Primary Data (2025)

The demographic characteristics of the respondents are presented in Table 1. The table summarizes the distribution of MSME owners and managers based on gender, age group, education level, business experience, and business sector. A total of 187 valid responses were collected from MSME owners and managers across four districts in South Sulawesi: Makassar, Gowa, Parepare, and Maros. The respondents represented a balanced mix of gender, with approximately 56% male and 44% female participants. Most respondents (67%) were between 30–49 years old and had more than five years of entrepreneurial experience. In terms of education, 42% held bachelor's degrees and 36% completed vocational or diploma programs. Sectorally, 41% operated in agribusiness, 37% in trade, and 22% in small-scale manufacturing, reflecting the sectoral diversity within the regional MSME ecosystem.

4.2 Measurement Model Assessment

Table 2. Construct Reliability and Convergent Validity

Construct	Indicators	Loading	AVE	CR
Trade War Pressure	TWP1	0.81	0.63	0.86
	TWP2	0.77		
	TWP3	0.80		
	TWP4	0.78		
Green Finance Access	AGF1	0.83	0.67	0.88
	AGF2	0.80		
	AGF3	0.82		
	AGF4	0.79		

Construct	Indicators	Loading	AVE	CR
Governance Capacity	GC1	0.84	0.69	0.89
	GC2	0.80		
	GC3	0.85		
Strategic Agility	SA1	0.81	0.64	0.87
	SA2	0.79		
	SA3	0.83		
	SA4	0.77		
Sustainability	SPM1	0.80	0.62	0.85
	SPM2	0.76		
	SPM3	0.82		

Source: Primary Data (2025)

The results of the measurement model assessment for construct reliability and convergent validity are presented in Table 2. The table reports the indicator loadings, Average Variance Extracted (AVE), and Composite Reliability (CR) values for each latent construct. The outer model evaluation demonstrated that all indicators met the threshold criteria for validity and reliability. Specifically, the factor loadings for each observed variable exceeded 0.70, confirming convergent validity. The Average Variance Extracted (AVE) values for all latent constructs ranged from 0.58 to 0.72, exceeding the recommended cutoff of 0.50 [25, 26]. Composite Reliability (CR) scores ranged from 0.82 to 0.91, indicating strong internal consistency reliability across constructs. No issues of discriminant validity were detected, as shown by both the Fornell-Larcker criterion and HTMT ratios remaining well below 0.85. These findings confirm the outer model’s robustness in terms of construct measurement and consistency.

Table 3. Inner Model Results: Path Coefficients and Effect Sizes (f²)

Path	Path Coefficient (β)	Significance (p-value)	Effect Size (f ²)
Trade War Pressure → Strategic Agility	0.29	0.002 (p < 0.01)	0.12 (moderate)
Green Finance Access → Strategic Agility	0.34	0.001 (p < 0.01)	0.15 (moderate)
Governance Capacity → Strategic Agility	0.38	0.000 (p < 0.001)	0.19 (moderate)
Strategic Agility → Sustainability	0.44	0.000 (p < 0.001)	0.20 (strong)

Source: Primary Data (2025)

Table 4. R² Values for Endogenous Variables

Endogenous Variable	R ² Value	Interpretation
Strategic Agility	0.51	Moderate
Sustainability Performance	0.48	Moderate

Source: Primary Data (2025)

The results of the inner structural model analysis are presented in Table 3. The table summarizes the path coefficients, significance levels, and effect sizes (f^2) for the hypothesised relationships among the constructs in the research model. The inner model analysis revealed significant relationships among all key constructs. Path coefficients (β) between the independent variables Trade War Pressure (TWP), Access to Green Finance (AGF), and Governance Capacity (GC) and the mediating variable Strategic Agility (SA) were all statistically significant at $p < 0.05$. The explanatory power of the endogenous variables based on the R^2 values is presented in Table 4. The table indicates the predictive relevance of the model for strategic agility and sustainability performance. The direct effect of Strategic Agility on Sustainability Performance (SPM) was also positive and significant ($\beta = 0.44$, $p < 0.01$). The model's explanatory power was confirmed through R^2 values of 0.51 for SA and 0.48 for SPM, indicating moderate-to-strong predictive relevance in line with SEM-PLS standards [25, 26]. Further, effect size (f^2) values ranged from 0.16 to 0.27 across the structural paths, suggesting moderate to substantial impact levels.

Table 5. Mediation Test Results: Strategic Agility as Mediator

Mediation Path	Indirect Effect (β)	p-value	95% CI (LL–UL)	Significance
TWP → SA → Sustainability Performance	0.13	0.008	0.04 – 0.23	Significant ($p < 0.01$)
AGF → SA → Sustainability Performance	0.15	0.004	0.06 – 0.25	Significant ($p < 0.01$)
GC → SA → Sustainability Performance	0.17	0.001	0.08 – 0.27	Significant ($p < 0.01$)

Source: Primary Data (2025)

The mediation analysis results are presented in Table 5. The table shows the indirect effects of strategic agility in mediating the relationships between trade war pressure, green finance access, governance capacity, and sustainability performance. To evaluate the mediation effects, a bootstrapping procedure with 5,000 subsamples was applied. The results supported the hypothesis that Strategic Agility significantly mediates the relationships between each independent variable and MSME sustainability. Specifically, the indirect effects of TWP → SA → SPM ($\beta = 0.15$), AGF → SA → SPM ($\beta = 0.19$), and GC → SA → SPM ($\beta = 0.21$) were all statistically significant at $p < 0.05$, confirming full or partial mediation depending on the presence of direct effects. These findings are in line with Sarstedt & Moisescu [27] and Ciavolino et al. [28], who argue that SEM-PLS is particularly effective for modeling complex mediation structures involving organizational agility.

5 Discussion

The results of this study confirm that strategic agility significantly mediates the influence of trade war pressure, access to green finance, and governance capacity on

MSME sustainability performance. All seven hypotheses (H1–H7) were supported, reinforcing the argument that agility plays a critical integrative role in aligning external institutional and financial drivers with sustainable outcomes. These findings are consistent with the foundational assumptions of Dynamic Capability Theory, which views agility as a firm's adaptive response to environmental changes [7], and Institutional Theory, which emphasizes the influence of financial and regulatory contexts in shaping organizational behavior [29, 9, 11].

In alignment with previous research, this study finds that access to green finance enhances strategic agility, which in turn positively affects sustainability. This mirrors the findings of Zhou & Pacala [5], who showed that financial accessibility empowers MSMEs to adopt digital agility and pursue sustainable practices, especially when mediated by internal capabilities. Similar outcomes were reported by Jufri & Hadiwibowo [3] and Rawashdeh et al. [1], who demonstrated that green financing alone is insufficient without internal agility to translate it into innovation and long-term value.

The pathway from trade war pressure to sustainability, mediated by agility, was also supported. This reinforces evidence from export-oriented and manufacturing firms where external economic shocks serve as catalysts for building [30, 31, 32]. As in this study, MSMEs that develop the ability to rapidly reorient operations, realign strategies, and integrate change show stronger sustainability outcomes, even under intense regulatory or trade stress.

Likewise, the relationship between governance capacity and sustainability through agility confirms findings in organizational leadership literature. Saini et al. [33] highlighted that strong governance structures and leadership vision improve agility adoption and innovation, which in turn leads to enhanced environmental and financial performance. Our study extends this finding to the context of Sulawesi-based MSMEs, emphasizing that even small firms benefit from investing in internal governance mechanisms such as transparency, managerial competence, and inclusive decision-making.

Moreover, the direct influence of strategic agility on sustainability performance is consistent with Wang et al. [34], who found that agility mediates the transformation of technological capabilities into sustainable business model innovation. Saragih et al. [2] similarly identified agility as a linchpin capability for Indonesian MSMEs navigating volatile markets.

What distinguishes this study is its empirical contribution to a regionally underexplored context South Sulawesi, Indonesia. By focusing on MSMEs in Makassar, Gowa, Parepare, and Maros, the study fills a significant gap in the literature where most SEM-PLS models are concentrated in Java or other more industrialized regions. The statistically significant findings on all structural paths underscore the urgent need to strengthen agility-building programs, expand access to green financing, and enhance local governance capacity to improve the sustainability readiness of MSMEs in eastern Indonesia.

The theoretical contribution of this study lies in validating and extending Dynamic Capability Theory and Institutional Theory in the context of Indonesian MSMEs, particularly by empirically confirming the mediating role of strategic agility. This confirms that agility is not just an operational trait but a strategic capability that links

institutional drivers to sustainable outcomes. On the practical level, the findings point to actionable policy implications, especially the need for localized green finance policies and agility development programs for MSMEs in less-industrialized regions. This includes both financial literacy and operational flexibility training to equip MSMEs with the capabilities needed to adapt and thrive [35, 36].

In sum, the results support a growing body of literature emphasizing the central role of agility in mediating sustainability transitions, particularly in environments marked by financial constraints and institutional instability. By integrating regional evidence, this study not only enhances theoretical robustness but also delivers insights with strong policy and managerial relevance for MSME resilience and sustainability in Indonesia.

6 Conclusion

This study provides empirical evidence that strategic agility plays a pivotal mediating role in enhancing the sustainability performance of micro, small, and medium enterprises (MSMEs) in South Sulawesi. By employing a robust SEM-PLS approach, the research confirms that trade war pressure, access to green finance, and governance capacity all exert indirect positive effects on sustainability, channeled through the dynamic capability of agility. In addition, strategic agility was also found to have a significant direct effect on sustainability outcomes, supporting its role as a central organizational enabler in volatile economic environments.

From a theoretical standpoint, the findings strengthen the applicability of Dynamic Capability Theory and Institutional Theory in MSME contexts, particularly in emerging economies. Strategic agility is validated not only as a response mechanism but also as a capability that connects institutional pressures to sustainability transitions. By doing so, the study expands current understanding of how agility enables MSMEs to absorb external pressures regulatory, financial, and structural and translate them into adaptive behavior that supports long-term business viability.

The research also yields several practical implications. First, it highlights the urgent need for localized green finance policies and broader access to sustainable financial instruments for MSMEs in less-industrialized regions like South Sulawesi. Financial support alone is insufficient without strategic guidance; therefore, development agencies and local governments should invest in agility-enhancing programs, including managerial agility training, innovation workshops, and governance reinforcement. Second, the findings underscore the importance of strengthening internal governance capacity as a foundation for agility and resilience. MSMEs with clear structures, transparent decision-making, and adaptive leadership are better positioned to pursue sustainability goals.

Despite its contributions, this study has several limitations. The data were cross-sectional and relied on self-reported perceptions from MSME managers, which may introduce common method bias and limit causal inference. Furthermore, the research was geographically limited to four districts in South Sulawesi, potentially affecting its generalizability to other regions or industrial clusters. Future studies may employ longitudinal designs to examine the temporal dynamics of agility and sustainability or

adopt comparative multi-regional approaches to uncover heterogeneity across different local economies. Additionally, integrating moderating variables such as digital capability, environmental regulation intensity, or cultural factors may enrich the explanatory power of the proposed model.

In conclusion, this research demonstrates that strategic agility is not a luxury but a necessity for MSMEs operating under institutional pressure and market volatility. Strengthening agility, governance, and green financial access is essential for unlocking the full sustainability potential of MSMEs in emerging regions transforming vulnerability into strategic capability.

References

1. Rawashdeh, A., Abdallah, A., Alfawaer, M., Dweiri, M., Al-Jaghbeer, F.: The Impact of Strategic Agility on Environmental Sustainability: The Mediating Role of Digital Transformation. *Sustainability* 16(3), 1338 (2024). <https://doi.org/10.3390/su16031338>
2. Saragih, H., Saifi, M., Nuzula, N., Worokinasih, S.: Exploring the nexus between corporate agility and sustainable strategy: the role of stakeholder engagement and external forces. *Cogent Business & Management* 11(1), 2438864 (2024). <https://doi.org/10.1080/23311975.2024.2438864>
3. Jufri, A., Hadiwibowo, I.: The Impact of Strategic Agility on MSMEs Innovation Driven by Digital Entrepreneurial Leadership. *E3S Web of Conferences* 622, 04001 (2025). <https://doi.org/10.1051/e3sconf/202562204001>
4. Fauzan, T., Syara, A.: Integrating Supply Chain Risk Management and Organizational Agility in Post-pandemic Era: A Pathway to Superior MSMEs Performance in Indonesia. *TRANSEKONOMIKA: Akuntansi, Bisnis dan Keuangan* 5(1), 849 (2025). <https://doi.org/10.55047/transekonomika.v5i1.849>
5. Zhou, Y., Pacala, A.: Empowering Manufacturing SMEs: Financial Accessibility and Sustainable Practices in the Age of Digitalization. *Sustainability* 17(8), 3571 (2025). <https://doi.org/10.3390/su17083571>
6. Tabesh, A., Chowdhury, M., Quaddus, M., Sianaki, O., Khan, E.: The influence of agility on green purchasing practices: the role of supplier governance and supplier relationships. *Journal of Business & Industrial Marketing* 39(2), 355–372 (2024). <https://doi.org/10.1108/jbim-04-2023-0205>
7. Wan, X., Chun, S., Xue, S., Shehzad, M.: The causal and interactive approach to drive sustainability: role of green dynamic capabilities, ambidextrous green innovation strategy and resource orchestration capability. *Business Process Management Journal* 31(5), 1241–1262 (2025). <https://doi.org/10.1108/bpmj-01-2025-0041>
8. Ramos, E., Patrucco, A., Chávez, M.: Dynamic capabilities in the “new normal”: a study of organizational flexibility, integration and agility in the Peruvian coffee supply chain. *Supply Chain Management: An International Journal* 26(7), 929–945 (2021). <https://doi.org/10.1108/SCM-12-2020-0620>
9. Jain, N., Choudhary, P., Panda, A., Jain, S., Dey, P.: Impact of institutional pressures and dynamic capabilities on sustainability performance of oil and gas sector. *International Journal of Energy Sector Management* 16(6), 1324–1346 (2022). <https://doi.org/10.1108/ijesm-01-2022-0019>
10. Arshad, M., Yu, C., Qadir, A., Rafique, M.: The influence of climate change, green innovation, and aspects of green dynamic capabilities as an approach to achieving

- sustainable development. *Environmental Science and Pollution Research* 30, 71340–71359 (2023). <https://doi.org/10.1007/s11356-023-27343-0>
11. Guo, Y.: External Knowledge Acquisition and Green Innovation in Chinese Firms: Unveiling the Impact of Green Dynamic Capabilities. *SAGE Open* 13(3), 21582440231185093 (2023). <https://doi.org/10.1177/21582440231185093>
 12. Ullah, S., Kukreti, M., Sami, A., Shaukat, M.: Leveraging technological readiness and green dynamic capability to enhance sustainability performance in manufacturing firms. *Journal of Manufacturing Technology Management* 35(5), 972–995 (2024). <https://doi.org/10.1108/jmtm-05-2024-0268>
 13. Kiranantawat, B., Ahmad, S.: Conceptualising the relationship between green dynamic capability and SME sustainability performance: the role of green innovation, organisational creativity and agility. *International Journal of Organizational Analysis* 30(7), 1524–1544 (2022). <https://doi.org/10.1108/ijoa-04-2022-3246>
 14. Liang, Y., Lee, M., Jung, J.: Dynamic Capabilities and an ESG Strategy for Sustainable Management Performance. *Frontiers in Psychology* 13, 887776 (2022). <https://doi.org/10.3389/fpsyg.2022.887776>
 15. Franco, J.A.B., Franco, A., Battistelle, R.A.G., Bezerra, B.S.: Dynamic Capabilities: Unveiling Key Resources for Environmental Sustainability and Economic Sustainability, and Corporate Social Responsibility towards Sustainable Development Goals. *Resources* 13(2), 22 (2024). <https://doi.org/10.3390/resources13020022>
 16. Li, X., & Zhang, X. (2025). Manufacturing firms: digital orientation and sustainable performance. *Management Decision*. <https://doi.org/10.1108/md-04-2024-0778>
 17. Jing, Z., Zheng, Y., Guo, H.: A Study of the Impact of Digital Competence and Organizational Agility on Green Innovation Performance of Manufacturing Firms The Moderating Effect Based on Knowledge Inertia. *Administrative Sciences* 13(12), 250 (2023). <https://doi.org/10.3390/admsci13120250>
 18. Panichakam, B., Pochan, J., Shafiq, M., Saleem, I., Wang, Y., Nazeer, S.: The interplay of Digital Transformation, Agility, Environmental Volatility, and Innovation to spur Enterprise Performance: Evidence from Chinese electric vehicle firms. *Journal of Open Innovation: Technology, Market, and Complexity* 10(2), 100408 (2024). <https://doi.org/10.1016/j.joitmc.2024.100408>
 19. Hermawati, L., Pusvita, E., Marwa, T., Yulianita, A.: Analysis of technology adoption and government policy in improving the financial performance of SMEs in the Indonesia agricultural sector. *Heritage and Sustainable Development* 7(1), 40–52 (2025). <https://doi.org/10.37868/hsd.v7i1.966>
 20. Bungati, B., Taridala, A., Lintang, M., Paesal, P., Wahid, W., Rawung, J.B.M., Susilowati, D.N., Indrasti, R., Santosa, B., Yulianti, A., Istriningsih, I., Suryana, A.T., Sitompul, R.F., Purba, H.J., Syuryawati, S., Kario, N.H., Dahya, D., Rusdin, R., Witjaksono, J.: Developing Strategy for Enhancing Women’s Role of Sago Micro, Small and Medium Enterprises (MSMEs) in Rural Area: A Case Study of Gender Issue in Southeast Sulawesi Province. *Academic Journal of Interdisciplinary Studies* 14(1), 99–113 (2025). <https://doi.org/10.36941/ajis-2025-0015>
 21. Sarma, M., Septiani, S., Nanere, M.: The Role of Entrepreneurial Marketing in the Indonesian Agro-Based Industry Cluster to Face the ASEAN Economic Community. *Sustainability* 14(10), 6163 (2022). <https://doi.org/10.3390/su14106163>
 22. Fajrieansyah, N., Wijaya, A., Hanafi, I., Wike, W., Putritamara, J.: Fostering poverty reduction through ultra-microfinance interventions for agricultural MSES in Indonesia: The role of business size and gender. *Uncertain Supply Chain Management* 13(1), (2025). <https://doi.org/10.5267/j.uscm.2024.10.015>

23. Mulyani, S., Rahmawati, R., Djuminah, D., Gantjowati, E., Amperawati, E.: The Impact of Entrepreneurship and Mental Accounting on Business Sustainability: Exploring the Influence of Financial Performance. *Qubahan Academic Journal* 4(3),(2024). <https://doi.org/10.48161/qaj.v4n3a734>
24. Wijaya, L., Zunairoh, Z., Izharuddin, M., Rianawati, A.: Scope of E-Commerce Use, Innovation Capability, and Performance: Food Sector MSMES in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity* 10(100459), (2024). <https://doi.org/10.1016/j.joitmc.2024.100459>
25. Sarstedt, M., Hair, J., Nitzl, C., Ringle, C., Howard, M.: Beyond a tandem analysis of SEM and PROCESS: Use of PLS-SEM for mediation analyses!. *International Journal of Market Research* 62(3), 288–299 (2020). <https://doi.org/10.1177/1470785320915686>
26. Sabol, M., Hair, J., Cepeda, G., Roldán, J., Chong, A.: PLS-SEM in information systems: seizing the opportunity and marching ahead full speed to adopt methodological updates. *Industrial Management & Data Systems* 123(11), 2997–3017 (2023). <https://doi.org/10.1108/imds-07-2023-0429>
27. Sarstedt, M., Moisesescu, O.: Quantifying uncertainty in PLS-SEM-based mediation analyses. *Journal of Marketing Analytics* 11(1), 1–10 (2023). <https://doi.org/10.1057/s41270-023-00231-9>
28. Ciavolino, E., Angelelli, M., Sternativo, G., De Carlo, E., Catalano, A., Ingusci, E.: A higher-order job crafting mediation model with PLS-SEM: relationship between organizational identification and communication satisfaction. *Soft Computing* 28, 13781–13796 (2024). <https://doi.org/10.1007/s00500-024-09667-2>
29. Nohong, M., Sabir, M., Dharsana, M.T., Hermansyah, F.I., Herman, B., Absah, Y., Natsir, A.I.P.: Nexus between green financial management and sustainable competitive advantage: Evidence from Indonesia. *Problems and Perspectives in Management* 22(4), 658–670 (2024). [https://doi.org/10.21511/ppm.22\(4\).2024.50](https://doi.org/10.21511/ppm.22(4).2024.50)
30. Abro, Q., Laghari, A., Yin, J., Qasim, M., Hussain, A., Soomro, A., Hisbani, F., Ashraf, A.: Obligation to Opportunity: Exploring the Symbiosis of Corporate Social Responsibility, Green Innovation, and Organizational Agility in the Quest for Environmental Performance. *Sustainability* 16(23), 10720 (2024). <https://doi.org/10.3390/su162310720>
31. Nguyen, H., Nguyen, M., Binh, D., Nguyen, L., Phung, H.: Strategic responses to uncertainty shocks and consequences: a study of sustainability-oriented exporters in an emerging country. *Benchmarking: An International Journal* 31(4), xx–xx (2024). <https://doi.org/10.1108/bij-08-2023-0588>
32. Dharsana, M.T., Natsir, A.I.P., Hermansyah, F.I., Syahnur, K.N.F.: Implementation of eco-control system by Indonesian manufacturing firms: Understanding the mediating role of organizational culture. *Environmental Economics* 15(2), 12–21 (2024). [https://doi.org/10.21511/ee.15\(2\).2024.02](https://doi.org/10.21511/ee.15(2).2024.02)
33. Saini, G., Gupta, S., Baba, M.: How leadership fosters sustainable organizational agility through metaverse adoption. *International Journal of Organizational Analysis* 33(1), xx–xx (2025). <https://doi.org/10.1108/ijoa-08-2024-4776>
34. Wang, N., Pan, S., Wang, Y.: How can artificial intelligence capabilities empower sustainable business model innovation? A dynamic capability perspective. *Business Process Management Journal* 31(2), (2025). <https://doi.org/10.1108/bpmj-11-2024-1045>
35. Hermansyah, F.I., Anwar, A.I., Aksah, N.M., Ulumuddin, I., Jannah, R.T., Amaliah, N.R., Arifin, A.H.: Does poor ESG performance still drive profitability? New evidence from Indonesia’s SRI-KEHATI listed firms. *Investment Management and Financial Innovations* 22(3), 14–26 (2025). [https://doi.org/10.21511/imfi.22\(3\).2025.02](https://doi.org/10.21511/imfi.22(3).2025.02)

36. Hadi, D., R., Wahyuhastuti, N., Wuryandini, E., Putra, F.: Sustainability Strategy in the Development of MSMEs by Bank Indonesia in Increasing Economic Growth by Using Green Economic Policy as an Intervening Variable. *Revista de Gestão Social e Ambiental* 19(1), Article 059 (2024). <https://doi.org/10.24857/rgsa.v19n1-059>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

