

Green Self-Efficacy, Green Knowledge Sharing, and Sustainability Performance: The Mediating Role of Green Innovation

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ABSTRACT

The growing demand for sustainable business practices has prompted small and medium-sized enterprises (SMEs) to strengthen their green innovation capabilities and sustainability-oriented human resource practices. This study examines the influence of green self-efficacy and green knowledge sharing on sustainability performance, with green innovation as the mediating variable, among coffee shop SMEs in Garut Regency, Indonesia. A quantitative explanatory design was applied, and data were collected through a five-point Likert-scale questionnaire from 153 SME owners and managers selected via purposive sampling. Data were analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4. The findings reveal that green self-efficacy and green knowledge sharing positively and significantly affect green innovation, and that green innovation positively and significantly affects sustainability performance. Green innovation also mediates the relationships between green self-efficacy, green knowledge sharing, and sustainability performance. The results suggest that improving the sustainability performance of SMEs is shaped not only by technological and operational factors but also by individual environmental capabilities and an organizational culture that encourages knowledge sharing. This study contributes to green management literature by offering an integrative model linking psychological factors, green knowledge management, green innovation, and sustainability performance in the Indonesian SME context.

Keywords: *green self-efficacy, green knowledge sharing, green innovation, sustainability performance, SMEs.*

1. INTRODUCTION

The concept of sustainability encourages organizations to consider not only economic profit but also social and environmental aspects. Sustainability performance, as outlined in the Triple Bottom Line approach), emphasizes balancing profit, people, and planet, and has become a key indicator of organizational success because business sustainability depends on financial performance, social value creation, and environmental quality. Organizations that adopt sustainability effectively tend to be more competitive, reputable, and adaptable to changing business environments.(Elkington, 1997)(Dyllick & Hockerts, 2002)

Sustainability is increasingly vital for Indonesian micro, small, and medium-sized enterprises (MSMEs), especially coffee shops, as coffee culture and the creative economy continue to grow. This trend is also evident in Garut Regency. However, the rapid expansion of coffee shops has introduced environmental issues such as extensive use of single-use plastics, excessive resource consumption, and inadequate waste management, indicating that many MSME coffee shops still struggle to implement sustainable business practices.

Sustainability performance issues are influenced not only by limited capital and technology but also by an organization's ability to develop environmentally friendly innovations. Singh et al. (2020) show that low green innovation capability is a major obstacle for organizations integrating sustainability into business activities. Green innovation refers to the development of products, processes, and management systems that reduce negative environmental impacts while increasing operational efficiency (Chen et al., 2006). Xie et al. (2019) explain that green innovation plays a crucial role in improving environmental and business performance. From a Resource-Based View

perspective, green innovation is viewed as a strategic capability that creates sustainable competitive advantage (Barney, 1991). In coffee shops, green innovation can be realized through environmentally friendly raw materials, energy efficiency, and sustainability-based waste management.

Another factor influencing sustainability performance is individual behavior, particularly green self-efficacy, which refers to an individual's belief in their capability to perform environmentally supportive activities. Grounded in Social Cognitive Theory (Bandura, 1986), individuals with high green self-efficacy tend to be more confident in adopting environmentally friendly business practices. However, prior results are inconsistent because the effect of green self-efficacy on sustainability performance is often contingent on organizational support and innovation capability, indicating a research gap.

Green knowledge sharing, the process of exchanging knowledge and experience on environmentally friendly practices among individuals and organizations, is another antecedent of sustainability performance. From a Knowledge-Based View, knowledge is a strategic asset that creates competitive advantage (Grant, 1996). Wang & Noe (2010) explain that knowledge sharing enhances innovation capability and organizational performance. In sustainability, the exchange of green practices enables organizations to innovate and improve sustainability initiatives, yet research on green knowledge sharing in MSME coffee shops remains limited and inconsistent.

Based on these empirical findings and research gaps, this study positions green innovation as a mediating variable in the relationships among green self-efficacy, green knowledge sharing, and sustainability performance. Green innovation is conceived as a transformation mechanism that translates individual capabilities and knowledge-sharing processes into sustainable business practices. The novelty of this study lies in integrating green self-efficacy, green knowledge sharing, green innovation, and sustainability performance into a single research model; treating green innovation as a mediating variable; and focusing on coffee shop MSMEs in Garut Regency, an under-studied setting. The study also integrates Social Cognitive Theory, the Knowledge-Based View, and the Triple Bottom Line to explain MSME sustainability performance.

Theoretically, this research extends the literature on sustainability performance in creative-economy-based MSMEs. Practically, the findings are expected to help MSME actors and stakeholders design sustainable business development strategies grounded in green management for coffee shop MSMEs in Garut Regency.

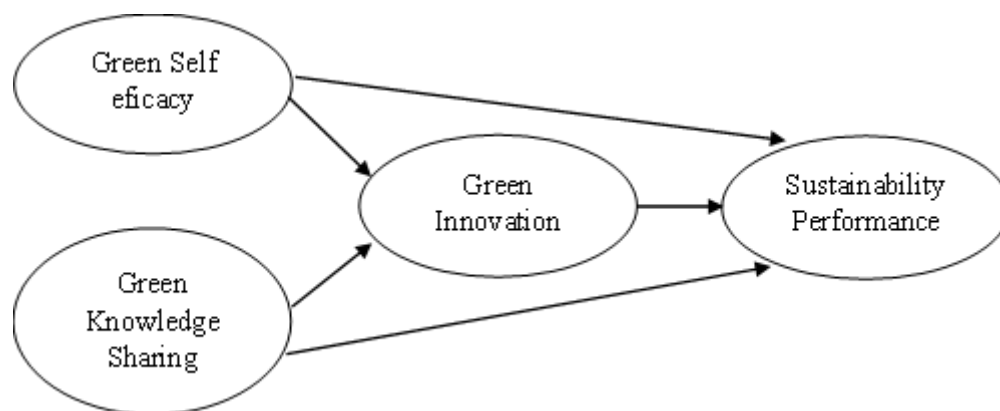


Figure 1. Research Model

The proposed hypotheses are:

- H1: Green self-efficacy has a positive effect on green innovation.
- H2: Green self-efficacy has a positive effect on sustainability performance.
- H3: Green knowledge sharing has a positive effect on green innovation.
- H4: Green knowledge sharing has a positive effect on sustainability performance.
- H5: Green innovation has a positive effect on sustainability performance.
- H6: Green innovation mediates the influence of green self-efficacy on sustainability performance.
- H7: Green innovation mediates the influence of green knowledge sharing on sustainability performance.

2. RESEARCH METHODOLOGY

This study employs a quantitative, explanatory research design to examine the causal relationships among green self-efficacy, green knowledge sharing, green innovation, and sustainability performance in coffee shop MSMEs in Garut Regency. The model positions green innovation as a mediating variable in the relationships between green self-efficacy, green knowledge sharing, and sustainability performance. The study population comprised all coffee shop MSMEs in Garut Regency, West Java, Indonesia. Purposive sampling produced a final sample of 153 owner-managers, deemed appropriate following Hair et al. (2022), who recommend a sample size of 5–10 times the number of indicators. Data were collected through questionnaires using a five-point Likert scale.

Data analysis used Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4, which is suitable for complex models, mediation testing, and predictive orientation (Hair et al., 2022). The outer model was evaluated using convergent validity, discriminant validity, and reliability via outer loadings, AVE, Cronbach's Alpha, Composite Reliability, and HTMT, with thresholds of outer loadings > 0.70, AVE > 0.50, and Composite Reliability and Cronbach's Alpha > 0.70. The inner model was evaluated using R^2 , f^2 , Q^2 , and SRMR. Hypotheses were tested via bootstrapping, with acceptance criteria of t-statistic > 1.96 and p-value < 0.05. Mediation effects were tested through the indirect effect and Variance Accounted For (VAF). To minimize common method bias, Harman's Single Factor Test was used with a variance-explained criterion of < 50%.

3. RESULTS AND DISCUSSION

3.1. Outer Model Evaluation

Table 1. Outer Loading Values

Variable	Indicator	Loading	Variable	Indicator	Loading
Green Innovation	GI1	0.910	Green Self-Efficacy	GSE1	0.909
	GI2	0.904		GSE2	0.924
	GI3	0.921		GSE3	0.897
	GI4	0.899		GSE4	0.907
	GI5	0.912		GSE5	0.920
	GI6	0.901		GSE6	0.913
Green Knowledge Sharing	GKS1	0.905	Sustainability Performance	SP1	0.906
	GKS2	0.929		SP2	0.916
	GKS3	0.887		SP3	0.911
	GKS4	0.880		SP4	0.911
	GKS5	0.917		SP5	0.901
	GKS6	0.909		SP6	0.929

Table 1 shows that all indicators exhibit outer loading values greater than 0.70, confirming that convergent validity is met and that the indicators effectively reflect the research constructs.

3.2. Inner Model Evaluation

Table 2. Hypothesis Testing of Relationships Between Variables

Relationship	Original Sample	T-Statistics	P-Values	Decision
Green Innovation → Sustainability Performance	0.439	6.067	0.000	Accepted
Green Knowledge Sharing → Green Innovation	0.571	10.372	0.000	Accepted
Green Knowledge Sharing → Sustainability Performance	0.336	5.598	0.000	Accepted
Green Self-Efficacy → Green Innovation	0.562	12.849	0.000	Accepted
Green Self-Efficacy → Sustainability Performance	0.312	4.686	0.000	Accepted

All proposed direct hypotheses are supported (Table 2). Green innovation, green knowledge sharing, and green self-efficacy each exert positive and significant effects on sustainability performance, while green knowledge sharing and green self-efficacy both significantly enhance green innovation.

Table 3. Results of Indirect Effect Testing

Indirect Effect Path	Indirect Effect Value
Green Knowledge Sharing → Green Innovation → Sustainability Performance	0.251
Green Self-Efficacy → Green Innovation → Sustainability Performance	0.247

Table 3 indicates that green innovation mediates the relationships between green knowledge sharing and sustainability performance, as well as between green self-efficacy and sustainability performance, showing that improvements in sustainability performance occur both directly and through the enhancement of green innovation.

3.3. Green Knowledge Sharing and Green Innovation

The finding that green knowledge sharing positively influences green innovation suggests that the exchange of environmentally friendly practices and ideas enhances an organization's capacity to develop green innovations. In MSME coffee shops, knowledge sharing is reflected in activities such as exchanging experiences on environmentally friendly practices, discussing operational efficiency, and sharing information on sustainability-based innovations through knowledge donating, knowledge collecting, and media sharing. Theoretically, this result supports the Knowledge-Based View, which treats knowledge as a strategic asset for competitive advantage (Grant, 1996). The result aligns with Wang & Noe (2010), Lin (2007), and Donate & Sánchez de Pablo (2015), and with Tang et al. (2018), who show that green knowledge sharing accelerates the diffusion of green innovation by giving individuals access to broader sustainability experiences. However, Abbas & Sağsan (2019) find that knowledge sharing does not always improve innovation performance in organizations with a weak communication culture, and Almulhim (2020) shows limited effects when technological and leadership support is inadequate, indicating that contextual readiness moderates this relationship.

3.4. Green Self-Efficacy and Green Innovation

Green self-efficacy positively affects green innovation, indicating that an individual's belief in their ability to perform environmentally friendly actions can drive green innovation. Employees with high green self-efficacy tend to be more active in proposing ideas, seeking solutions, and supporting sustainability-oriented innovations. In MSME coffee shops, entrepreneurs with strong self-belief actively pursue innovative solutions for energy efficiency, waste management, and environmentally friendly product development. The finding supports Social Cognitive Theory (Bandura, 1986), in which self-efficacy shapes motivation, behavior, and the willingness to attempt new tasks. The result is consistent with Kim et al. (2019), Jaiswal & Dhar (2015), Afsar & Umrani (2019), and Kuo et al. (2021). Nevertheless, Newman et al. (2018) report that self-efficacy does not directly enhance innovation performance when a strong culture of innovation support is absent, suggesting that green self-efficacy requires organizational support to translate into green innovation.

3.5. Green Innovation and Sustainability Performance

Green innovation has a positive and significant effect on sustainability performance. Organizations that effectively implement environmentally friendly innovations improve their capacity to reduce negative environmental impacts, increase resource efficiency, and strengthen competitive advantage across economic, social, and environmental dimensions. In MSME coffee shops, this is reflected in the use of environmentally friendly raw materials, energy efficiency, waste management, and green operating procedures. The result supports the Triple Bottom Line framework (Elkington, 1997) and the Natural Resource-Based View (Hart, 1995). It is consistent with Chen et al. (2006), Xie et al. (2019), Singh et al. (2020), and Dangelico and Pujari (2010). However, Fernando et al. (2019) caution that green innovation does not always significantly improve financial performance in resource-constrained firms, underscoring that returns to green innovation may be longer-term in nature.

3.6. Green Knowledge Sharing and Sustainability Performance

Green knowledge sharing positively affects sustainability performance. By exchanging knowledge, organizations enhance environmental awareness, improve work processes, and increase operational efficiency. Knowledge of green work practices, energy efficiency, and environmental management improves decision quality and operational effectiveness, consistent with Wang & Noe (2010), Ngah et al. (2019), and Lin (2007). However, the impact of knowledge sharing depends on organizational readiness, sustainability culture, and supporting technological systems.

3.7. Green Self-Efficacy and Sustainability Performance

Green self-efficacy positively affects sustainability performance. Employees who are confident in their environmental competence tend to be more involved in sustainability-supporting activities and green work practices, consistent with Kim et al. (2019) and Afsar & Umrani (2019). Yet Raineri & Paillé (2016) and Dumont et al. (2017) find that the effect weakens without a supportive organizational climate or green work culture, indicating that self-efficacy must be embedded in a supportive context to translate into sustainability outcomes.

3.8. The Mediating Role of Green Innovation

Green innovation mediates the relationships between green knowledge sharing and green self-efficacy, on one hand, and sustainability performance, on the other. Individual belief in environmental capabilities and the exchange of green knowledge enhance not only sustainability performance directly but also organizational capacity to create green innovations, which in turn drives sustainability outcomes. Green innovation thus operates as a transformation mechanism linking individual psychological resources and organizational knowledge processes to sustainability performance, in line with Albort-Morant et al. (2016), Singh et al. (2020), and Chen et al. (2006). Unlike most prior studies that treat green innovation as a direct independent variable, this study positions it as a mediator. Practically, MSME coffee shops should develop sustainability training programs, regular knowledge-sharing forums, clear procedures for green initiatives, and targeted incentives for environmentally friendly innovation, supported by ongoing leadership commitment.

4. CONCLUSION

This study shows that green self-efficacy and green knowledge sharing exert positive and significant effects on both green innovation and sustainability performance among coffee shop MSMEs in Garut Regency. Green self-efficacy strengthens business actors' confidence in implementing environmentally friendly practices and their ability to develop green innovations in products, processes, and managerial activities, while green knowledge sharing facilitates the implementation of sustainability initiatives through the exchange of information, experiences, and collective learning. Green innovation, in turn, significantly contributes to sustainability performance by improving operational efficiency, reducing environmental impacts, enhancing reputation, and increasing customer satisfaction, and it mediates the relationships between green self-efficacy, green knowledge sharing, and sustainability performance.

Theoretically, the study extends the understanding of sustainability performance in creative-economy-based MSMEs by integrating Social Cognitive Theory, the Knowledge-Based View, and Triple Bottom Line Theory, and by highlighting the joint role of individual psychological resources and organizational knowledge processes. Practically, coffee shop MSMEs should strengthen green innovation through environmentally friendly raw materials, energy efficiency, waste reduction, and sustainability-oriented operating systems, while building green self-efficacy and a culture of knowledge sharing among employees. Local governments are encouraged to support green MSMEs through training, mentoring, green business workshops, and access to environmentally friendly technologies. The cross-sectional, single-sector design limits causal inference and generalizability; future research could adopt longitudinal designs, extend the model to other sectors and regions, and incorporate moderators such as organizational culture, leadership style, and technological readiness.

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